

FLIGHT

The
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ENGINEER
&
AIRSHIPS

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"FLIGHT" PHOTOGRAPHS

To those desirous of obtaining copies of "Flight" Photographs, these can be supplied, enlarged or otherwise, upon application to Photo. Department, 36, Great Queen Street, W.C.2.

DIARY OF CURRENT AND FORTHCOMING EVENTS
Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in this list—

1928

- June 20 Aero Golfing Soc.—Team Match v. Porters Park G.C.
- June 26-29 F.A.I. Annual Conference, Brussels
- June 29 —
- July 15 Paris Aeronautical Salon
- June 29 Annual Dinner of R.A.F. Club
- June 29 Royal Air Force Dinner Club, Sixth Annual Dinner at Connaught Rooms, 8 p.m.
- June 30 Royal Air Force Display, Hendon
- June 30 Gordon Bennett Balloon Race, Detroit, U.S.A.
- June 30 American Inter-Collegiate Air Race
- July 6-7 Blackpool Flying Meeting

EDITORIAL COMMENT



THE attitude of FLIGHT towards trans-oceanic flights on landplanes is too well known to need repetition here, but it would be churlish in the extreme to withhold from Capt. Kingsford-Smith and his companions our admiration for the magnificent flight which they have just successfully completed, from

San Francisco to Brisbane and Sydney, thus for the first time in history spanning the great Pacific by air.

San
Francisco—
Brisbane

There is a vast difference between making such a flight for the first time and merely repeating one which has already been accomplished. To some

extent there may be justification for taking a fair amount of risk in order to demonstrate for the first time that a certain flight is possible. To repeat it, and in repeating it to take even greater risks, is merely folly. And that is what happened over the Atlantic flight craze last year, when Lindbergh took his chance alone in a single-engined machine, and when later Commander Byrd and his companions proved the feasibility of making the flight in a three-engined machine and carrying a full crew and proper equipment. But the orgy of attempts which followed could not possibly achieve any useful purpose.

So in this trans-Pacific flight, the first attempt was successful, and the gallant aviators who took the chance deserve every credit. But we do hope that their success will not lead to such a series of attempts as those which followed Lindbergh's and Byrd's Atlantic successes.

Moreover, the Kingsford-Smith flight was actually far less foolhardy than have been many others attempted. For instance, the individual distances were reasonably well within the capacity of the machine, the longest being from Hawaii to Fiji, about 3,200 miles. A strong head wind of gale force was encountered, and the fuel supply ran low, but the machine made its landfall. Three engines were used, so that, with such individually reliable power plants as the Wright "Whirlwind," the chances of a forced landing were reasonably remote, and finally, Capt. Kingsford-Smith did not yield to the temptation

which has overridden the better judgment of so many aviators and caused them at the last minute to leave behind their wireless apparatus. Throughout the flight from San Francisco to Brisbane, or at least very nearly so, the machine was in wireless communication with one ground station or other, so that ashore it was always possible to know how the flight was progressing. Interruptions occurred, when there were anxious moments, it is true, but that was as nothing compared with the many instances last year when machines "barged off into the blue," and nothing was ever heard of them again. For instance, take the very dramatic moment when, after sending the message "Hit air pocket," the machine was silent for two hours. That might have meant the end. Fortunately it did not; but if it had, would that not at least have been better than the days and weeks of uncertainty and anguish which have attended so many Atlantic attempts?

Truly wireless has proved itself during the last few weeks. Not only on this flight from America to Australia, but also in the Arctic, where Nobile and his companions have at last been able to communicate with the outside world, and have, in consequence, a very good chance of being rescued. After these two experiences we think it can rightly be claimed that the authorities have every justification for insisting that on all such flights in the future the carrying of wireless, and a member of the crew qualified to operate it, is made compulsory. We are not in favour of Government prohibition of trans-oceanic flights, as we have frequently stated, but we do feel that nothing but good can come from a demand that every reasonable safeguard shall be taken, and the carrying of wireless is surely one.

From a British Empire point of view the San Francisco-Brisbane flight is extremely significant. At one stroke, so to speak, it has brought America much closer to Australia, even if it will be some considerable time before a *regular* service can be operated. From San Francisco to Brisbane, by the route followed by Kingsford-Smith, is a little over 7,000 miles. From London to Port Darwin, by any

air route likely to be operated within the next few years, is very nearly double that distance. Australia is already doing considerable trade with the United States, and if a seaplane air mail between the two countries should prove feasible, and thus bring the time down to about one week, there is little doubt that the eastern portions of Australia will find it convenient to extend that trade. From an Empire point of view, we cannot afford to overlook this fact, and thus the flight of the "Southern Cross" provides one more, and a very strong, argument for speeding-up British Empire air communications.

In this connection we cannot refrain from publishing a cutting which a FLIGHT reader in Benares has just sent us. The cutting is from the *Statesman* of May 16, from the "Here and There" column by "Kim," and is forwarded by our correspondent "without comment." It reads as follows:—

"Captain D'Oisy—what a bird-like name—has flown from Karachi to Calcutta in two hops. It will presently be done in one, and I wouldn't be surprised if in due course flying night and day, some 'plane will not be bringing us letters from London in four days. But I would certainly be surprised if the machines or pilots were British. While we are talking about Imperial air service and what not, the Dutch and Japanese are inaugurating them. Their machines will drop letters as an act of grace upon Calcutta. We will see the British air service about the time we see the new Howrah Bridge. What a scandal. Enough to make any Briton shave off his moustache, do up his hair in Marcelle waves, put on silk stockings, and walk down the Strand with a Burmese parasol in his hand."

Now that the daily newspapers have got hold of the "story," it is, perhaps, permissible to refer to a great "secret." The Fairey Aviation Company is building a machine specially designed as a long-distance aeroplane. Perhaps when this and others contemplated materialise we may see letters dropped on Calcutta, not as an act of grace, and thus be spared the necessity for the Marcelle wave and the Burmese parasol!



NEW THREE-ENGINE TORPEDO-CARRYING FLYING-BOAT : The Supermarine "Solent," which is driven by three Armstrong-Siddeley "Jaguar" engines, carries two 1,500 lb. torpedoes, slung one on each side of the

AFRICAN SURVEY FLIGHT

"Round England" Conclusion

SIR ALAN COBHAM landed at Rochester on June 11 in a heavy thunderstorm and completed his 2,000-mile cruise of Great Britain's seaports following his arrival home from the African Survey Flight of 20,000 miles. It was seven months since the Short "Singapore" flying-boat had started off from the Medway. He carried many passengers on the home cruise and on the arrival at Rochester Lord Thomson and Air Vice-Marshal Sir Vyell Vyvyan were amongst them, for whom General P. R. C. Groves and Mrs. Groves had given up their places at Southampton.

Amongst those who greeted Sir Alan at the slipway of Short Bros. on the river were the Mayor of Rochester (Councillor F. C. A. Matthews) and Mayoress, Air Commodore J. A. Chamier and Maj. G. P. Bulman, Mr. Oswald Short, and Mr. Basil Johnson. A reception was held later in the Guildhall, when Sir Alan was presented with a brass chiming clock by the City of Rochester. Mr. Basil Johnson of Rolls-Royce, Ltd., and Mr. Oswald Short paid tribute to Sir Alan's valuable work for aviation. Short Bros. and Rolls-Royce, Ltd., presented him with two rose bowls, and silver replicas of the flying-boat were prepared for Capt. H. V. Worrall, Mr. C. R. Bonnett, Mr. F. Green and Mr. C. E. Conway.

Sir Alan said that the success of the flight had been the result of team-work rather than the efforts of any one man, and paid tribute to Capt. Worrall and the crew. The flight was also the result of private enterprise, in which Sir Charles

Wakefield had played a prominent part. It had been materially aided by the Air Ministry in lending the flying-boat.

The home cruise began with a flight to Hull on June 5, then to Newcastle the next day, when a huge crowd gathered and the Lord Mayor of Newcastle and other civic officials received the party on the Tyne Commissioners' yacht. In the afternoon the cruise was resumed northward to Leith, where a landing was effected at 5 p.m. On the following morning Glasgow was reached, the descent being made in the Firth of Clyde. Official receptions again followed, and Sir Alan broadcasted a most interesting talk which was transmitted from all stations.

Belfast was next visited on June 8, then Liverpool, June 9, Cardiff, June 10, Southampton, June 10, and finally the return to Rochester via London the same day. Col. The Master of Sempill was a passenger on the Liverpool, Cardiff and Southampton stages. Brig-Gen. Groves and Mrs. Groves were passengers right round to Southampton, and Col. and Mrs. Warwick Wright were on board at the finish.

The purpose of the cruise round our ports was to demonstrate a flying-boat of a type that is likely to be widely used in the future for commercial aviation, and after it had done a strenuous, necessary job. All the authorities at each place beside the public were able to inspect the Short "Singapore" (Condors) just as it was after the 20,000-mile cruise round Africa.



["FLIGHT" Photographs]

THE END OF A LONG "SHORT" STORY: Sir Alan Cobham's latest big flight, known as the "Sir Charles Wakefield Survey Flight Around Africa," was concluded on June 11, when the Short-Rolls-Royce "Singapore" metal flying-boat was safely moored at Rochester—as shown in the bottom photograph of our illustration—at the finish of Sir Alan's supplementary stage, the tour of Britain. Our top pictures, taken on this occasion, show, left, Sir Alan (in the centre) and Lady Cobham (in the stern with Mrs. Warwick Wright) coming ashore from the "Singapore." In the bows are Col. Warwick Wright and Air Vice-Marshal Sir Vyell Vyvyan. On the right, the Lord Mayor of Rochester (centre), with the Town Clerk (left), and Mr. Oswald Short await, in the rain, the arrival of the "Singapore."



[" FLIGHT " Photograph

HOME AT LAST! Sir Alan and Lady Cobham arrive back at Rochester at the conclusion of the big African Survey Flight. Reading from left to right are—Mr. Kemp (General Manager at "Shorts"); Col. Warwick Wright, Mrs. Warwick Wright, A. N. Other, The Mayor of Rochester, Lady Cobham, Mr. Bibby (of Short Bros.), Sir Alan Cobham, the Town Clerk of Rochester and Mr. Oswald Short.



[" FLIGHT " Photograph

SOME OF THE CREW OF THE SHORT "SINGAPORE": From left to right, Mr. S. R. Bonnett (Cine-matographer), Messrs. Smith (Mechanic) and Nazer (Aircraftsman), who joined the cruise at Bonny to replace Mr Green, and Mr. C. E. Conway (Engineer).

Sir Alan also made speeches everywhere in the cause of air-mindedness generally, advocating support of the light 'plane clubs and the development of municipal aerodromes, as well as urging the importance of commercial aviation for our ports. Abnormal crowds greeted his arrival in many towns, so that it is inevitable that considerable good seed has been sown.

Next Tuesday, June 19, a dinner in his honour will be given at the Savoy Hotel, at which Sir Charles Wakefield is expected to preside, and amongst those who have, we under-

stand, accepted invitations, are Sir Samuel Hoare, Air Vice-Marshal Sir Sefton Brancker, and Air Vice-Marshal Sir John and Lady Higgins.

Lady Cobham, who was indisposed on the arrival at Rochester, and was thought to be possibly suffering from a slight attack of malaria, was reported to be better the following day.

Sir Alan's assistant pilot, Captain Worrall, was forced to leave the flying-boat at Cardiff through an attack of the same complaint.

"JUPITER" VII PASSES 100 HOURS' TYPE TESTS

THE 100 hours' official type test on the Bristol "Jupiter" Series VII engine, carried out in accordance with the British Air Ministry schedule of "Type and production tests for mechanically-driven supercharger engines," was successfully concluded in May, 1928. The engine, No. J 7009, was a standard production type, and the tests were carried out at the approved rating for this engine of 420 h.p. at 12,000 ft. at normal r.p.m.

The engine maintained its tune throughout the test, developing, on the final power curve taken at the end of the run, power both in excess of its rating and of the power developed at the commencement.

After the conclusion of the test the engine was stripped down and officially examined by the Inspector of the Aeronautical Inspection Directorate. From his report it is seen that the engine generally was in very good condition, there being a complete absence of measurable wear on the supercharger components, while the average wear on the major components of the engine was only a fraction of the wear permissible before replacements are required.

Preliminary Power Curves.—Carried out up to 1,950 maximum r.p.m. for both rated ground conditions and rated altitude condition.

100 Hours' Endurance Test.—Carried out at 1,775 normal r.p.m., and at 90 per cent. of the equivalent ground rating. The first 40 hours were carried out on the Froude hydraulic dynamometer, followed by 50 hours on the test hangar and the final 10 hours on the Froude. For the 100th hour, engine opened up to full rated power.

Slow Running and Acceleration Tests.—Sustained slow running and acceleration up to normal r.p.m.

1 Hour Test at High Speed.—Carried out at 2,050 r.p.m., or 5 per cent. in excess of the maximum permissible r.p.m.

1 Hour Test at High Power.—Carried out at maximum permissible r.p.m. and at maximum permissible boost.

15 Minutes' Test at Excess Power.—Carried out at maximum permissible r.p.m. and at 11 per cent. in excess of the rated boost.

Final Power Curves.—Carried out up to 1,950 maximum r.p.m. for both rated ground condition and rated altitude condition.

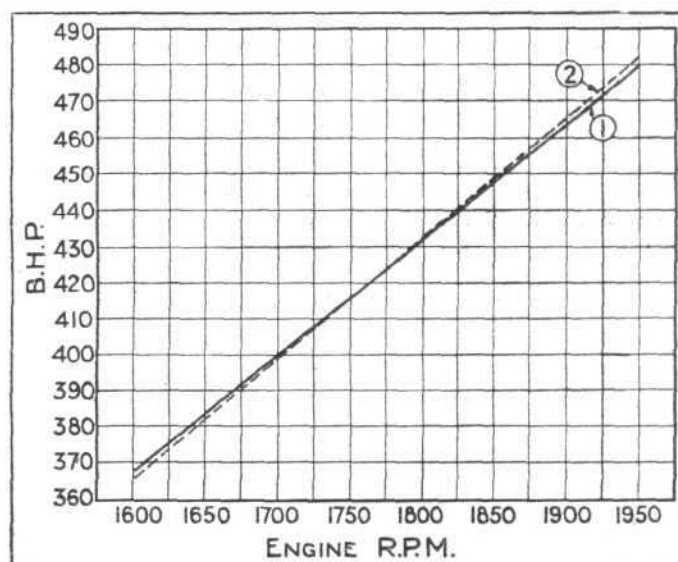
Fuel and Oil Consumptions.—The average consumptions for the 100 hours' Endurance Test were: Fuel, 27.5 gallons-hour; oil, 5.2 pints-hour.

Wear on Major Components During the Test (inches)

Cylinder bore: 0.001. Piston: 0.005. Gudgeon-pin

diameter: nil. Small end bush bore: nil. Wrist pin diameter: 0.0002. Wrist pin bush bore: nil. Crankpin diameter: 0.0004. Big end bush bore: 0.0005. Big end bush outside diameter: 0.0014. Master rod liner bore: nil. Cam sleeve bush bore: 0.0007. Crankshaft sleeve: nil. Eccentric gear bore: 0.0002. Eccentric floating bush, o/diameter: nil. Eccentric floating bush bore: 0.001. Eccentric outside diameter: 0.005. Crankshaft tail bearing: 0.001. Blower drive gears: nil. Blower bearings, nil.

At the conclusion of the test the engine was found to be in excellent condition, as shown above, the wear on the major components was considerably below replacement requirements, while there was a complete absence of measurable wear on the supercharger components.



Bristol "Jupiter VII" J. 7009 passes Air Ministry's 100 hours' Type Tests: These power curves, of which 1 represents readings taken before the 100 hours' type tests, 2 readings taken after, are at the rated altitude of 12,000 ft.

French Plans for Aviation

FRANCE intends to organise new air routes. A postal airline will be run from Bordeaux to Geneva, passing through Limoges, Clermont-Ferrand and Lyons. A day service only will be the commencement but a night service will also start later. The contract is to be given to a company formed by the French Railways and it is hoped that industrial concerns will be prompted to inaugurate other lines. Syria may also be connected with France by air, with the help of the present Paris-Constantinople line as far as Belgrade. From there will be a branch line to Salonika, and seaplanes will connect up to Athens and Syria. Air communication with Indo-China from France is yet another aim of the French Government.

Parachutes for Poland

MR. IRVING, the inventor of the Irving parachute, and a private owner, recently flew to Warsaw, Poland, and back in his "D.H. Moth" (Cirrus). He left Letchworth on May 25, flew via Berlin, and after leaving there he reached Warsaw in 12 hrs. 5 mins. on the following day. On the return journey, about a week later, he touched at Hanover,

and from there he flew to Letchworth in 10 hrs. 30 mins. It is understood that the trip was for business purposes, and that he is arranging to establish a local factory in Poland for the production of the Irving parachutes for the Polish Air Force. Polish labour will be employed.

Air Mails

MAILS from this country which left Southampton on June 2 for Canada and were transferred to an aeroplane at Rimouski from the ship landed in Toronto in the record time of six days, six hours, and 42 mins.

Private Owners Please Note

THE A.D.C. Aircraft, Ltd., inform us that they have provided facilities for housing light aeroplanes at their works at Croydon aerodrome, Waddon, and desire to offer garage and maintenance for private owners' machines. This has been done because they thought it desirable that such accommodation should be available south of London. Terms will be quoted to those interested either by post or telephone (Holborn 4076). Fuel can be supplied and ground engineers are always available.

The Royal Aero Club of the United Kingdom

OFFICIAL NOTICES TO MEMBERS

SPECIAL MEETING OF THE COMMITTEE ON JUNE 8

Present.—Lieut.-Col. M. O'Gorman, C.B., in the chair; Brig.-Gen. Sir Capel Holden, K.C.B., F.R.S.; Griffith Brewer; Wing-Com. T. O'B. Hubbard, M.C., A.F.C.; Lieut.-Col. Sir Francis K. McClean, A.F.C.; Maj. H. A. Petre, D.S.O., M.C.; Lieut.-Col. M. O. Darby, O.B.E.; Lieut.-Col. John D. Dunville, C.B.E.; Lieut.-Col. J. T. C. Moore-Brabazon, M.C., M.P.; Col. F. Lindsay Lloyd, C.M.G., C.B.E.; and the Secretary.

Election of Members.—The following new members were elected:—

Lieut. John Dawson Ainger.
Robert Marshall Buchan.
Capt. William James Royle Martin.
Sir Robert McLean.
Wilfred Ernest Nixon.
Lewis Rivers Oldmeadow.
Flying Officer Charles Edward Murray Pickthorn.
Reginald Thomas Wild.

Aviators' Certificates.—The following aviators' certificates were granted:—

8271 Eric Arthur Huntington Henderson Flying School.
Whiteley
8272 Fred Ruddy Lancashire Aero Club.
8273 Geoffrey Hill Ambler .. Yorkshire Aeroplane Club.
8274 Horace Reginald Humphries Yorkshire Aeroplane Club.
8275 Eugene Yucheng Hsiao .. Henderson Flying School.
8276 Charles Edward Murray R.A.F. Graduation Certificate.
Pickthorn

8277 Francis Colborne Fisher .. London Aeroplane Club.
8278 Kenneth George Murray Henderson Flying School.
8279 Christopher William Graham Wood De Havilland Flying School.
8280 Harry Crowther .. Yorkshire Aeroplane Club.
8281 Robin Herbert Edward Sanders-Clark London Aeroplane Club.
8282 Edwin Reginald Andrews London Aeroplane Club.
8283 Edward Robert Gort .. Lancashire Aero Club.
8284 Clarence Henry Powell .. Hampshire Aeroplane Club.
8285 Hugh Nicholas Aubyn Richardson Hampshire Aeroplane Club.
8286 John Hughes .. Henderson Flying School.
8287 Randall Murray Bertram Ward London Aeroplane Club.
8288 Harold John Vincent Ashworth Nottingham Aero Club.
8289 James Christian Victor Kiero Watson London Aeroplane Club.
8290 John Roderick Horton Baker Midland Aero Club.

King's Cup.—It was decided that the race should finish at Brooklands Aerodrome instead of Hendon as previously announced.

Sub-Committees.—The reports of the Racing Committee and Private Owners' Committee were received and adopted.

Offices: THE ROYAL AERO CLUB,
3, CLIFFORD STREET, LONDON, W. 1.
H. E. PERRIN, Secretary.

GOVERNMENT LUNCHEON TO SIR GEORGE WILKINS AND LIEUT. EIELSON

On June 7 Capt. Sir George Wilkins and Lieut. Eielson, who accomplished an important flight over the Arctic just recently, were entertained at a luncheon in their honour by the British Government at the Savoy Hotel.

Sir Samuel Hoare, who presided, said they were there that day to celebrate a fine and useful achievement and to do honour to two men who were as distinguished as explorers as they were brave and skilful aviators. Both had already a splendid record to their credit—claiming an experience of 10,000 miles of arctic flying and having both made three arctic expeditions that would always hold a place in the records of exploration and discovery.

Sir George Wilkins, continued Sir Samuel, had crammed incident after incident into the 40 years of his life. In the years before the great war he was filming the war between Turkey and Bulgaria and was with Mr. Stefansson in his arctic expedition. In the war he was with the Australian flying corps and won the Military Cross and a bar to it. The war ended and he went off as naturalist with the Shackleton expedition to the South Pole. Two years followed during which he collected specimens for the British Museum in Northern Australia, and since 1926 he had been engaged upon his arctic explorations by aeroplane, the most conspicuous and successful of which they were there to celebrate that day. Australia was proud of him, Great Britain was proud of him, and the whole British Empire was delighted to see the honour that the King had conferred upon him.

Sir George Wilkins and Mr. Eielson did not attempt to fly over the pole. Commander Byrd and General Nobile had already made the flight. With the true instinct of the explorer, Sir George Wilkins and Mr. Eielson set themselves the task of crossing the polar sea from Alaska to Spitzbergen by a new route and a route that might lead them to the discovery of land. For three-quarters of their journey they were flying over a part of the world that had never been seen by any man. The weather and the visibility were bad. At one time the temperature was 50 degrees below zero, at another the worst storm that Spitzbergen had ever endured at this season of the year broke upon them. Yet they continuously carried out their observations and in the space of twenty flying hours successfully completed their splendid adventure. They had accomplished not only a feat of bravery but also a work of definite usefulness and value.

It was, continued Sir Samuel, important to all of us that we should extend the stream of human knowledge over the uncharted spaces of the world, and it was particularly important to aviators to know more of the flying conditions in the Arctic regions. He remembered Mr. Stefansson—who regarded the arctic in much the same way as we regarded the Riviera—saying that in the future the regular route from Europe to the Far East would pass over the North Pole. He knew the distance between England and Japan was about 6,500 miles via the Pole, as compared with over 11,000 miles by ordinary flying routes of today, and who would say that with the development of the airship and the aeroplane the polar regions might not in the future become a regular and accepted route of swift travel between west and east?

May the crew of the Italian airship "Italia," added Sir Samuel, survive what appeared to have been a disaster, and return to take their places with the great explorers, and add to the fund of knowledge that these aeroplane flights had already accumulated. He knew he was voicing the wishes of everyone there when he said to our Italian friends:—"Whilst we are honouring the two aviators who have returned, we are also thinking of those whose fate is still shrouded in ice and mist. We admire their courage and devotion and we earnestly pray that they may still be welcomed back to Italy."

"I am told," concluded Sir Samuel, "that the Eskimos at Barrow call Sir George Wilkins 'Anakluto,' which means 'strong wise man.' The Eskimos at Barrow are right. They see in men like Sir George Wilkins and Mr. Eielson the embodiment of the strength and wisdom that is ready to

face danger, that is ready to endure discomfort and privation, and that is constantly adding to the fund of human knowledge and to the long record of human achievement."

Mr. Amery, Secretary for the Dominions, speaking in support of the toast, referred to the value of the flight as an exploration. Never before in history, he said, had so much of the world's map been cleared up in a single day. Vast areas of the Arctic Ocean were today definitely settled as to what they contained in the shape of land and sea.

Capt. Sir G. Wilkins, responding, stated that they never planned to fly within 300 miles of the North Pole, but to explore the area to the north-east of Point Barrow for a particular purpose. It was known that aeroplanes could fly in almost any latitude, but they did not wish to prove that. They wished to discover some point in that area on which a meteorological station might be established. Their quest first started three years ago with a search of an area to the west of Point Barrow in the hope of finding some islands there. In 1926 they had great misfortune and only 200 miles were explored. The next year they flew north-west of Point Barrow, and planned to fly 600 miles to the north-west and land, if land were found, and take soundings. The engine failed twenty minutes after starting and a forced landing took place. Soundings were taken which showed that the ocean there was more than a mile deep, and, therefore, islands were not likely to be in the vicinity. The engine again failed on the return flight, when 80 miles from their base, and the machine had to be abandoned whilst they walked home. This year the explorers had only the north-eastern sector to investigate, and it was planned that if no land was found within 600 miles they would continue on to Spitzbergen. When the storm was encountered near the latter island there remained the choice of waiting until it passed or going through it.

Continuing, the explorer said that his experience of droughts in Australia and of the hardships which great weather changes could bring, led him to believe that it was necessary to investigate meteorological conditions in the future. By a meteorological plan, they might be able to forecast the conditions and establish stations in the Arctic and Antarctic. The area north of Point Barrow and that south of the Pacific Ocean needed to be explored before a complete meteorological scheme could be presented to the Governments concerned. It was his determination, if possible, to investigate both those areas. Although their investigation to the north of Point Barrow had proved negative they had completed their work in the Arctic. They had found it would be necessary to establish their station there on the floating ice, which would be difficult but not impossible. The southern area remained to be explored, and he hoped it would be his privilege to carry out that work.

Lieut. Eielson also briefly responded.

Eight years ago, at the invitation of Mr. Griffith Brewer, whose association and interest in matters aeronautical go back many decades, an informal luncheon was held at Jules Restaurant to meet Mr. Stefansson and Capt. G. H. Wilkins, in connection with their exploration work. A happy re-union of all those possible who were at that meeting at a similar impromptu lunch was made on Monday last, again at the invitation of Mr. Griffith Brewer. Mr. Stefansson, unfortunately, not being able to be present, when Sir G. H. Wilkins and his pilot joined the gathering, and after Sir Hubert had received personal congratulations upon receiving the honour of knighthood for his recent exploit, gave some intensely interesting and informative points of his travel in the arctic region. It was a very happy and intimate gathering, giving a promise of what may be looked for at the more formal assemblies, on Wednesday and Thursday of this week, at which again Sir Hubert Wilkins will be the guest of honour.

THE GREAT PACIFIC FLIGHT

WITH the echoes of Bert Hinkler's flight to Australia early this year still audible to its ears that vast dominion has now risen with equal enthusiasm and pride to the great Pacific flight of another of its sons, Capt. Kingsford-Smith. For the first time in history the Pacific Ocean has been flown and Australia linked with America by air, for the "Southern Cross" monoplane completed the final sea stage from the Fiji Islands to Brisbane on June 8-9. Australia has to share the honours generously with America, because that country supplied the money, the machine, the three engines, and a valuable half of the crew. Australia can be well satisfied, however, with the distinction of providing the leader and his second-in-command, both of whom received part of their flying experience in our Royal Air Force.

Technically, the flight was a triumph for wireless operating and navigation as well as for the machine and engines. Without the remarkable accuracy of the American navigator, Lieut. H. W. Lyon, and the wireless communication maintained by the American operator, Mr. J. Warner, the reliability of the Wright "Whirlwind" engines would have been of little avail in that boundless ocean, which, on all stages of the flight, practically left no alternative but to reach the successive destinations or drown.

In our last issue we gave in detail the first stages of the flight and the arrival at the Fiji Islands. It will be remembered that this Fokker machine left San Francisco on May 31 and covered 2,100 miles to Honolulu in approximately 27 hrs., a feat that was both successfully and disastrously attempted by many American pilots last year. Wireless messages were heard most of the time, an exception being during the night when a battery was exhausted. Their position was recovered through communication with the U.S. destroyer *Richmond*, and the machine was sighted by s.s. *Milaka* at a point 1,450 miles from the Californian coast. It was characteristic of the messages that they were very optimistic, perky and personal, and not at all suggesting a difficult and dangerous journey. It has been stated that 110 American naval vessels stood by during that stage. When the airmen reached Honolulu an enthusiastic reception was accorded them.

Preparations were immediately begun for the longest section of all, a distance of 3,200 miles to the Fiji Islands. First a short hop of 100 miles was made to the island of Kauai amongst the Hawaii group, in which Honolulu is on Oahu. About 1,290 gallons were taken on board. The actual take-off on June 3 at 5.20 a.m. from Barking Sands on the island of Kauai was witnessed by a large crowd, and the leader, Capt. Kingsford-Smith, who was piloting, planned to steer towards Oahu and intercept the wireless beacon from Wheeler Field, Honolulu, for 1,500 miles to the south.

Perfect weather prevailed at the start and the wireless messages were again optimistic for some time, and there was a remote possibility apparently of making a landing in an emergency on Canton Island, one of the Phoenix Islands about 1,700 miles away. When night came on them, after flying all day it gave indications of bad weather and they predicted a rough passage, which unfortunately matured. A terrific storm battled with the machine. Signals became very faint and there fell a long silence of 4 hours. But towards dawn the messages were located again revealing steady though laboured progress and hopeful possibilities of emerging through the ordeal.

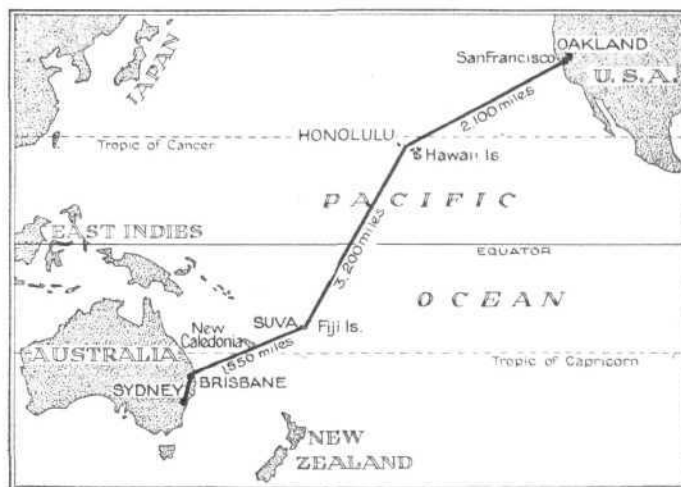
At 2.21 p.m. the monoplane circled the landing field at Suva, Fiji Islands, and landed amidst the excited natives. It was the first aeroplane to land there, and only once before had some of them possibly set eyes on a machine. That was when a seaplane was taken there by boat some years ago and did a few flights to discover the possibilities for an air mail service. The airmen covered that second stage of 3,200 miles in 34½ hours. Further honours were paid them, but they did not delay to rest upon them.

A suitable taking-off ground had first to be selected for the final trip to Australia. It was found at Naselai Beach, Fiji, and on June 8 at 2.50 p.m. the last stage to Brisbane was begun with anticipations of covering it in about 20 hours. The taking-off spot was a narrow strip of beach, and there was a fairly strong cross wind blowing, but the load was comparatively light this time: being 880 gallons of petrol and 32 gallons of oil. Wireless communication was immediately begun. Capt. Kingsford-Smith was piloting. Three hours later came word that a compass had continued to give trouble since leaving, and one generator was defective, but the message ended on an optimistic note. A little later they reported bad weather ahead for the coming night and Ulm was piloting to give Kingsford-Smith a rest.

An hour later only one generator was in use and the batteries were being spared, then at 7.20 in the evening the monoplane was climbing to 5,000 ft. owing to adverse weather, and it was revealed that for two hours they had experienced the worst conditions of the whole flight. Exceptionally heavy rain fell, soaking Kingsford-Smith and Ulm, and they were flying blindly. A message before midnight stated that there were 700 miles yet to go, and another at 1 a.m. made it 600 miles. At 6 a.m. the estimated figure was 250 miles from Brisbane and the speed 90 m.p.h. Wireless signals were growing fainter with daylight. Finally at 10.10 a.m. the destination was reached, and the Pacific ocean flown for the first time in history.

Brisbane is Capt. Kingsford-Smith's birthplace and he and his crew were rapturously received.

On June 10 the flight was resumed towards Sydney and a landing was made at 3.10 p.m. on the Mascot aerodrome, where Kingsford-Smith and Ulm completed their Round-Australia flight last year. Machines escorted the "Southern Cross" and the town resounded with whistles and sirens when



PACIFIC OCEAN FLIGHT: The course across the Pacific from San Francisco to Brisbane, via Honolulu and the Fiji Islands flown by the "Southern Cross" monoplane between May 31 and June 9.

it appeared over the harbour. The leader greeted his aged parents, whilst the Americans, Lyon and Warner modestly tried to retire into the background, but the crowd asked for them, and they were duly hauled on to a lorry with the other pair to take part in the triumphal procession.

Swift reward came their way. The Commonwealth Government decided to make them a grant of £5,000. Other subscriptions brought the total to £16,000, and £50,000 has been mentioned as the ultimate figure that will accrue to them. As a token of friendship and tribute to the success, their financial backer, Mr. Allen Hancock, of Los Angeles, relieved them of all indebtedness to him.

Sir Samuel Hoare sent the following telegram to Mr. Bruce, Prime Minister of Australia:—"Air Council tender hearty congratulations on the successful completion of magnificent Pacific flight by Captain Kingsford-Smith and Mr. Charles Ulm." The Secretary of State telegraphed to the Air Attaché at the British Embassy in Washington:—"Please convey the following message from Sir Samuel Hoare to U.S. Government: 'Air Council tender hearty congratulations on Lieutenant Lyon's participation in Pacific flight successfully accomplished.'" President Coolidge also sent his congratulations.

In statistics the performance of the "Southern Cross" was approximately as follows:—

First Stage.—San Francisco to Honolulu, 2,100 miles, in 27 hours, on May 31 to June 1. Petrol carried, 1,200 gallons.

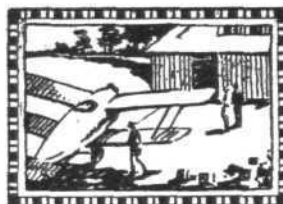
Second Stage.—Honolulu to Suva, Fiji Islands, 3,200 miles, in 34½ hours, on June 3-4. Petrol carried, 1,290 gallons.

Third Stage.—Suva, Fiji Islands, to Brisbane, 1,550 miles, in 20 hours on June 8-9. Petrol carried 880 gallons. Total mileage flown (approx.)—7,000.

Machine:—Fokker monoplane. Engines: Three Wright "Whirlwinds" 200 h.p. each.

It is the intention of Capt. Kingsford-Smith and Mr. C. Ulm to continue on a flight round the world.

PRIVATE



FLYING

A Section of **FLIGHT** in the Interests of the Private Owner, Owner-Pilot, and Club Member

AN AIR TOUR IN FRANCE

MR. A. H. DOWNES-SHAW, Chairman of the Bristol and Wessex Aeroplane Club, and Mr. W. L. S. Keith Jopp, a member, made a recent air tour to France in a D.H. "Moth." The former is the pilot owner of D.H. "Moth" G-EBST, which he registered in August last year, after learning to fly at Bristol. They left Bristol on April 5, and reached Croydon, where a delay of 50 minutes occurred whilst the necessary air travel documents were filled in by Imperial Airways for an inclusive fee of 2s. 6d. Glorious weather followed them on the trip to the coast, a house in Tonbridge was circled, and Lympne came into view after 50 minutes. Over the Channel rolling clouds obscured the water, and the crossing was made at 4,000 ft. by compass guidance, whilst a seemingly prolonged journey led to a fierce argument between the tourists concerning the correct course. Apparently the navigator's arguments were justified, for the first break in the clouds revealed Calais on the left.

It was not long then before the Route Nationale running south from Calais was picked up. It brought them to St. Inglevert, where their first landing on French soil was made. Oddly enough, a comparison in the temperatures of England and France on that day were found to be in favour of the former. London had reigned under a warm spring day, but a wintry temperature prevailed at St. Inglevert.

They had been led to expect no accommodation for the night nearer than Calais, 12 kms. away, but, on the contrary, they discovered an excellent cafe at St. Inglevert, kept by an Englishman, who made them very welcome for the night. Le Bourget was the next stage, with a landing at Beroq for re-filling, and there was a tiresome delay at the aerodrome, lunch, petrol and oil each taking an hour to obtain. Through that, Dijon could not be reached before darkness descended, so a landing was successfully made in a large field outside Tonnerre.

They left the machine in the care of a farmer whilst they explored the town for accommodation. Before starting again the next morning they had been led to expect an

aerodrome at Avallon, but it was not seen, and the landing was consequently done in a field for re-filling. To reach the next stage to Châlons, the Côte d'Or had to be crossed, where the ground was not very high, and having soil which was too poor for even the French to cultivate. The Saône Valley was entered, and the calm, warm air, highly cultivated land, flooded river valley and mountain ranges presented an immediate change. Fifty miles to the east the Hautes Alpes were a sheer white range on the horizon, and below the direction of flight were the well-known French wine towns of Beaune, Châlons and Mâcon.

Lyons was the next stop, where the bright blue Rhone joined the muddy Saône. Till then the weather had been extremely favourable to the tourists, and so had the wind, so that on starting off again they fully hoped to reach Nice by night. But the Rhone Valley became the opposite of the Saône, blowing up a strong head wind with increasing force, leaving the D.H. "Moth" struggling to keep level with cars on the roads beneath, and letting mere trains shoot ahead and go far out of sight.

Rain and mist came, and there were the most horrible bumps. Over Orange the machine was practically brought to a standstill, so, finally, with a real need for relief, they landed at Avignon and filled up again with petrol. Within half-an-hour they were battling again and trying to reach Marignane, near Marseilles, but once more the strong winds defeated their intentions, and, with the help of darkness, forced them down at the Miramas aerodrome. The machine was left under the lee of the repair pits, and the town was sought for rest. During this visit a Marmon car with Rapson tyres was attempting a 50,000 miles' endurance test, having already been running day and night for three weeks, with two drivers sharing twelve-hour shifts. One of the drivers, Mr. R. J. Hopkinson, was very kind to the air tourists.

A Costly Forced Landing

Heavy pebbles carpeted the centre of the aerodrome, and these were advanced as the reason for the sudden disappearance of the tail skid-shoe. With the tank filled up the flight was continued at 9 a.m. towards Nice. The roughest weather was encountered, in which the machine could only crawl round the mountains, and, finally, it was decided to land again in a field which seemed to have a surface of hard grass, but, unfortunately, it proved to be soggy ground sown with corn. The D.H. "Moth" gently tipped over on its nose, and the propeller was neatly finished off. This happened on Easter Sunday, when nobody was at work, so within a short time they were the centre of intense curiosity.

It was an anxious task keeping the rest of the machine intact. In a few hours they became a confirmed local attraction. Whole families drove out in cars to see them. A man who appeared to be a farm hand was picked out and despatched for rope to pull the tail down with. Then the wings were folded with the help of the most intelligent of the crowd and arrangements completed for transport to Marignane, 60 km. away. One of the tourists went for the lorry whilst the other remained on guard for 2½ hours until he returned. The next event was a fierce argument with the owner of the field over compensation for damage; 500 francs were demanded and refused, so the local gendarme was sent for and he contributed his knowledge of the law, declaring that in the event of a dispute the damage should be judged by two independent assessors. Our tourists invited the disputant to make a selection from the crowd, and an impromptu court was solemnly held. Two farmers and the gendarme gravely inspected the field and fixed the compensation at 400 francs, which was paid.

It was a long job hitching the tail of the machine on to the lorry and after journeying 3 km. the machine heeled over at a sharp bend, bringing the right wing on a corner of the lorry and breaking a rib. Road troubles were met farther on and as darkness simultaneously set in, the tourists, in the interests of their machine, refused to allow further progress.



Our sketch map traces the course flown by Mr. A. H. Downes-Shaw and his companion, Mr. W. L. S. Keith Jopp, through France on a D.H. "Moth" (Cirrus).

Their driver and his mate were despatched for the night and they settled down in the cockpits until morning. The night was cold but bright with moonlight. At intervals the inquisitive "paysan" strolled up to inspect them and was startled by the wagging of the rudder.

Marignane was reached without further incident the next morning, and the agreed sum of 800 francs gladly handed over. Capt. G. P. Olley, of Imperial Airways, kindly inspected their machine and declared that with a new propeller it would be safe to fly. But it was proposed to get the Deutsche Luft Hansa man to repair the rib. A wire was despatched to the de Havilland Company asking for a new propeller and shoe to be sent out by air. A consoling feature to them in their trouble was the sight of three machines on the aerodrome all with broken propellers.

To pass the time the tourists went to the Riviera by train, and on their return the new propeller was waiting for them, having been sent out in record time. Before leaving, it was noticed that three large machines were giving joy-rides to local people, and this was apparently an everyday occurrence.

The Return Flight

After leaving Marignane for the return flight they landed at Lyons within 2 hrs. 20 mins., and continued the next day to Dijon and Le Bourget. A long wait had been anticipated to collect petrol, oil and déjeuner. At 1 p.m. they were ready to start, and the weather locally was perfect, but reports along the route were alarming. Four machines were down at Beauvais and others at Abbeville and Berck. A start was made the next day, Sunday, but very low clouds drove them down at Poix. Berck was reached after another attempt after lunch and the tanks were filled up in preparation for crossing the Channel. They set off, leaving word of their intention to range along the coast to St. Inglevert and land there if the weather was too bad. The air liners could be seen crossing without difficulty, but three-engined machines were a different proposition to a single-engined light aeroplane. After much uncertainty it was decided to land for the night at St. Inglevert. The next morning a driving blizzard swept the earth and sea from sight, and wireless reports stated that northern France and a good part of England were under snow. Thus the day had proved fruitless.

On Tuesday, the following day, it was imperative for them to return, and they proposed to go by boat and cross again for their machine the following week-end. But before finally

committing themselves, they agreed to take a last glance at the sky. They sighted a hopeful patch of blue, and decided to chance the air crossing. It was only a short time after taking off that the navigator discovered England. This particular experience taught them that if the pilot wishes to see his objective when flying the Channel the early morning is the best time for the westward course and late afternoon for the eastward course. Lympe was circled and a thick fog drove them down at Penshurst where another delay arose, which, for them, showed the difference between the English and French organisations. On every French aerodrome, except Le Bourget, the usual formalities had usually been overcome in 15 mins. At Penshurst there was a 2 hours' wait before Customs were cleared. On resuming, the course was set for London and then Filton, Bristol, where the D.H. "Moth" landed within 1 hr. 50 mins.

Performance and Cost

This tour covered 2,000 miles in 27 flying hours. They learned to adjust the mixture to the various temperatures, and the petrol consumption amounted to 20 miles to the gallon. There were differences in the prices of petrol in various districts, and everywhere it cost more than in England. Cutting out the cost of the new propeller and Riviera, etc. expenses the daily expense during the 11 days of flying and waiting averaged 25s.

It was noticed that the French press devotes considerable space regularly to aviation, and the Service de la Navigation Aérienne, the French counterpart to our Department of Civil Aviation, renders extensive service to pilots on tour. It controls seven or eight aerodromes. The tourists' arrivals and departures were telegraphed on, and the night they failed to reach Marignane the aerodrome lights were kept on until midnight.

Weather reports were obtained free of charge there, and a landing fee of roughly 9d. covered 48 hours' stay, whereas in England 2s. 6d. is charged and a further 1s. for each eight hours' stay. On the other hand, the precautions which we create for the safety of flying in this country are regarded as mainly superfluous in France. They were tickled to find 1914-15 machines used today in civil flying, and at Le Bourget Mr. Keith Jopp was found crooning over one of his war-time machines and longing to fly it—until he had examined it closely. (NOTE.—For the details of this tour from which the above has been written we are indebted to the tourists' diary published in the *Bristol Times and Mirror*.—ED.)

LIGHT 'PLANE CLUBS

London Aeroplane Club, Stag Lane, Edgware. Sec., H. E. Perrin, 3, Clifford Street, London, W.1.

Bristol and Wessex Aeroplane Club Filton, Gloucester. Secretary, Capt. C. F. G. Crawford, Filton Aerodrome, Patchway.

Hampshire Aero Club, Hamble, Southampton. Secretary, H. J. Harrington, Hamble, Southampton.

Lancashire Aero Club, Woodford, Lancs. Secretary, C. J. Wood, Oakfield, Dukinfield, near Manchester.

Midland Aero Club, Castle Bromwich, Birmingham. Secretary, Maj. Gilbert Dennison, 22, Villa Road, Handsworth, Birmingham.

Newcastle-on-Tyne Aero Club, Cramlington, Northumberland. Secretary, A. H. Bell, c/o The Club.

Norfolk and Norwich Aero Club, Mousehold, Norwich. Manager, F. Gough, The Aerodrome, Mousehold, Norwich.

Nottingham Aero Club, Hucknall, Nottingham. Hon. Secretary, Cecil R. Sands, A.C.A., Imperial Buildings, Victoria Street, Nottingham.

The Scottish Flying Club, 101, St. Vincent Street, Glasgow. Secretary, Harry W. Smith.

Southern Aero Club, Shoreham, Sussex. Secretary, C. A. Boucher, Shoreham Aerodrome, Sussex.

Suffolk Aeroplane Club, Ipswich. Secretary, Maj. P. L. Holmes, The Aerodrome, Hadleigh, Suffolk.

Yorkshire Aeroplane Club, Sherburn-in-Elmet, Yorks. Secretary, Lieut.-Col. Walker, The Aerodrome, Sherburn-in-Elmet.

LONDON AEROPLANE CLUB

REPORT for week ending June 10.—Flying time, 24 hrs. 20 mins. Dual instruction, 15 hrs. 30 mins.; solo flying, 8 hrs. 50 mins.

Dual instruction.—With Capt. S. L. F. St. Barbe: C. W. Bonniksen, H. Greenland, H. Sutton, A. J. Millar, Miss Wilson, B. L. Middleton, Miss V. M. Cholmondeley, P. A. Wills, C. Reilly, J. R. Rymill, J. J. Hofer, J. R. Rymill, G. W. Hall, C. N. Green. With F. R. Matthews: Miss V. Cholmondeley, J. A. R. Stroyan, Miss H. Cholmondeley, G. E. Clair, P. A. Wills, Dr. Cook, C. W. Bonniksen, E. H. Thierry, S. Blythe, E. Davis.

Solo Flying.—P. W. Hoare, J. C. V. K. Watson, A. J. Millar, B. L. Middleton, R. Sanders Clark, Dr. Cook, E. R. Andrews, N. J. Hulbert, J. J. Hofer, F. C. Fisher, G. W. Hall, H. B. Michelmore.

BRISTOL & WESSEX AEROPLANE CLUB

REPORT for week ending June 9.—Total flying hours, 23 hrs. 25 mins. Dual instruction, 16 hrs.; solo instruction, 1 hr. 10 mins.; soloists, 2 hrs. 10 mins.; passengers (seven flights), 2 hrs.

Instruction under Mr. Bartlett: Messrs. Clarke, Amory, Peters, Davis, Allinson, Lynas, Jellicoe, Keeling, Hughes, B. Bathurst. Under Mr. Tratman: Messrs. Keeling, Button, Stephens, Singh. Under Mr. Allott: Mr. Hughes.

Most of the week has been blessed with fine weather, but the week-end was a tragedy of fierce gales that prevented flying. One of our members, Mr. A. E. Allott, is accompanying the Duchess of Bedford and Capt. Barnard in their adventurous flight to India and back in eight days in the "Princess Xenia." We wish them the best of luck, and a prosperous and successful voyage.

CINQUE PORTS FLYING CLUB

REPORT for week May 29 to June 4, both inclusive. Machine: Moth G: E.B.W.C. Total time for week 22 hrs. 25 mins. Test flight, 5 mins.

Dual instruction with Maj. Clarke: Mr. Maurice Braddell, 2 hrs. 10 mins.; Mr. Cattell, 45 mins.; Comdr. Gubbins, R.N., 3 hrs. 30 mins.; Mr. Douglas, 1 hr.; Mr. R. Dallas Brett 2 hrs.; Comdr. Mary Allen, 2 hrs.; Miss Tagart, 2 hrs.; Mr. Edgson Wright, 1 hr.; Mr. Story, 2 hrs. 30 mins.; Capt. Took, 1 hr. 45 mins. Mr. Faraday, 15 mins.; Capt. Little, 15 mins.; Mrs. Twaites, 15 mins.

Special Flight with Major Clarke: Lady Heath, 1 hr.

Joy Rides with Maj. Clarke: Mr. Pretorius 10 mins.; Mr. Robinson, 10 mins.; Mr. Hill, 10 mins.; Mrs. Harris, 10 mins.; Mr. Simmonds, 10 mins.

Soloists: Mr. Edgson Wright, 15 mins.; Mr. R. Dallas Brett, 20 mins.

The Club is steadily speeding up its flying time, and Sunday the 3rd, was our best record to date, when we put in 7 hrs. 40 mins. with our one machine.

On Monday morning, the 4th instant, Lady Heath chartered our Moth in order to fly over Folkestone to escort the Chrysler Car Expedition from the Cape to London, which she had last met at Abercorn, Rhodesia. Major Clarke landed her in a field near Ashford, alongside the main road. The cars picked her up and took her on to London.

On Monday, the first two members went solo. In the morning Mr. Edgson Wright, of Ashford, who was a pilot in the war, but had not flown since 1917, did a good first solo on the Moth and in the afternoon, our first ab initio pupil, Mr. R. Dallas Brett, did 20 mins. solo, after 5 hrs. 20 mins. dual.

REPORT for June 5 to June 10, both inclusive:—Machine, De Havilland "Moth," G: E.B.W.C. Total time for week, 7 hrs. 55 mins.; test flights, 20 mins.

Dual instruction with Maj. Clarke : Comdr. Gubbins, R.N., 1 hr. 30 mins.; Mr. R. Dallas Brett, 5 mins.; Mr. Douglas, 1 hr.; Mr. West, 1 hr. 30 mins.; Capt. Took, 1 hr.; Mr. Edgson Wright, 30 mins.

Joy rides with Maj. Clarke : A. N. Other, 10 mins.

Soloists : Mr. Story, 30 mins.; Mr. Edgson Wright, 45 mins.; Mr. R. Dallas Brett, 50 mins.

The weather interfered considerably with flying during the week, and over the week-end : there was a 45-mile-an-hour wind and very bad bumps, so that our total flying time for the week is the poorest yet recorded. However, our second *ab initio* pupil, Mr. F. E. Story, of Hythe, flew solo, after eight hours' dual instruction.

On Wednesday, the 6th instant, one of our members, Mr. K. Edgson Wright, flew over with Maj. Clarke to the Ashford (Kent) Golf Links, and landed on the fairway of the thirteenth hole. They played a few holes and surveyed the links from the aviating point of view. These links have excellent landing facilities for light aeroplanes, and should become popular with private owners in the future.

In the early hours of Sunday morning a considerable number of members visited the aerodrome to see the Duchess of Bedford off for India in the Fokker F. VII, with Bristol "Jupiter" engine, piloted by Capt. Barnard and Mr. E. H. Alliot. Their take-off was most unpleasantly exciting, as they ploughed through the telegraph wires on the south boundary of the aerodrome, and for a moment it was touch and go. Fortunately, it ended in "go."

HAMPSHIRE AEROPLANE CLUB

REPORT for week ending June 10.—Total flying time, 21 hrs. 45 mins. Dual instruction, 4 hrs. 30 mins.; "A" pilots, 13 hrs. 15 mins.; solo, 2 hrs. 50 mins.; passenger flights, 50 mins.; tests, 20 mins.

Instruction (with Flight-Lieut. Swaffer) : Mr. King, Whittle, Maj. Jenkins, Kerry, Graham-Gibbs, Wroughton, Colls, Walker, Wills.

Passengers : Mrs. Graham-Gibbs, Mr. Schumacher, Wilford, Smith.

"A" Pilots :—Don Cierva, Leech, Hayter.

Soloists :—Mr. H. King, Rayson, Whittle, Kerry, Wroughton, Westlake.

We have only had one and a half flying days at the club this week, high winds have made flying impossible on the other days.

Mr. Kerry carried out his first solo on Wednesday. Mr. Westlake's name was omitted from a former report. He did a most successful first solo, and is now well on the way to his "A" licence. Our machine that visited the Midland Club for their pageant was not successful enough to carry off any prizes. Mr. Hayter certainly did his best, for having lost sight of his bunch of balloons in the bursting competition, saw a bunch that he thought was his, and proceeded to knock the wind out of them. Unfortunately, for him, they had been sent up for Miss Winifred Brown, so he got no marks!

We shall be very glad to welcome Mr. Schreiber again, we have forgotten all about his episode with the Avian and the enclosure posts.

LANCASHIRE AERO CLUB

REPORT for week ending June 8.—Flying time, 24 hrs. 9 mins. Instruction, 11 hrs. 40 mins.; solo, 7 hrs. 45 mins.; passengers, 3 hrs. 20 mins.; tests, 1 hr. 24 mins.

Instruction (with Mr. Baker) : Chart, Goss, Garner, Sellers, Brooking, Benson, Stross, Taylor, S. Faulkner, Weale, Mehta, Tweedale, Mason, Agar, Miss Baerlein, Greenhalgh, Pattrieux, Kay, Taylor, W.

Soloists :—Garner, Harrison, Mills, Tweedale, Sellers, Chart.

Pilots :—Meads, Davison, Caldecott, Brooking, Hardy, Ruddy, Crosthwaite, Agar, Cohen, Heath, Lacayo.

Passengers (with Mr. Meads) : Goss. (With Mr. Lacayo) : Caldecott, Mills, F. Scholes. (With Mr. Hall) : Williamson. (With Mr. Scholes) : Lacayo.

During the week Messrs. Garner, Sellers, and Chart carried out successful first solos, while Mr. Harrison did his height test.

This week's crash was quite exciting. While Capt. Baker was giving instructions in landings his pupil hit a bad patch of ground on the aerodrome with considerable force, carrying straight on into the air after the bump. Capt. Baker instructed his pupil to fly straight and level while he had a look at the undercarriage. His inspection revealed that one wheel was swinging loose and the other appeared to have folded back under the wing.

Capt. Baker then took over control and succeeded in landing without turning the machine over—a very creditable performance.

MIDLAND AERO CLUB LIMITED

REPORT for week ending June 2.—Total flying time was 30 hrs. 11 mins. Dual, 13 hrs. 37 mins. Solo, 8 hrs. 33 mins. Passenger, 6 hrs. 40 mins. Test, 1 hr. 21 mins.

The following members were given dual instruction by Flight-Lieut. Rose, D.F.C., and Mr. Sutcliffe : E. P. Lane, G. C. Jones, G. Robson, J. B. Briggs, M. Turner, N. Khatri, J. Cobb, E. J. Brighton, S. H. Smith, A. E. Coltman, R. C. Baxter, S. Nesbit, G. E. C. Hill, R. D. Bednell, M. A. Murtagh, G. Brington, H. Beamish, Capt. J. C. Chaytor, G. P. Haylock, S. Duckitt, S. G. Hall, T. H. Drury, E. D. Wynn.

Solo : E. P. Lane, G. Robson, R. L. Jackson, W. Swann, J. Rowley, S. G. Hall, S. H. Smith, A. Ellison, W. M. Morris, E. D. Wynn, R. D. Bednell, E. J. Brighton, H. Tipper.

Passengers : M. C. Mander, Dr. A. V. Johnson, E. Eckersley, Dr. J. Kennedy, G. P. Haylock, S. H. Smith, E. B. Cheston, F. J. Whitworth, Mrs. Ellison, D. P. Mendez, O. W. Barwell.

On Tuesday, Flight-Lieut. Rose flew LW from Hamble to Castle Bromwich.

Suggestion for New Club

MR. G. ADAMS, Oak House, Woodcote Road, Caversham Heights, Reading, writes as follows :—"Is it possible to form a light aeroplane club within the district of Berkshire and South Oxfordshire? There must be many people who are keen on aviation but have not the facilities of running a machine privately. If a start could be made with only one machine the membership would undoubtedly grow very rapidly, as indicated by the various efforts throughout the country. Perhaps it would be possible to call a meeting to discuss the future of such a club at some early date."

Australian Club Items

THE New South Wales Club made a record total of 115 hours' flying during the week ending March 1. One of their pilots was asked to resign from the club after a special

NEWCASTLE-UPON-TYNE AERO CLUB

REPORT for week ending June 10.—Total flying hours, 15 hrs. 30 mins. Instruction (with Mr. J. D. Parkinson) : Messrs. Nicholls, Lloyd Brown, Alton, Hayton, Jackson and Miss Trevelyan (3 hr. 10 mins.).

Solo (with Mr. G. R. Jackson) : 20 mins.

"A" Pilots :—Mrs. Heslop, Messrs. C. Thompson, W. B. Ellis, R. N. Thompson, A. H. Bell, W. L. Runciman, J. Lloyd Brown, F. L. Turnbull, C. Wilson, P. F. Heppell, F. H. Phillips, Dr. Dixon and Dr. Alderson (7 hrs. 35 mins.).

Passengers (with Mr. C. Thompson) : Mrs. Heslop and Mr. Luckman. (With Mrs. Heslop) : Mr. C. Thompson. (With Mr. J. D. Parkinson) : Mrs. Robson and Mr. White (1 hr. 20 mins.).

Tests :—45 mins.

On Wednesday, June 8, the club sent two Moths accompanied by Miss Leathart, flying her Grasshopper, to the mouth of the Tyne on the occasion of the visit of Sir Alan J. Cobham.

Some excellent photographs were obtained, and the club was represented at a civic luncheon held in the Mansion House, Newcastle.

We are pleased to report the success of Mr. F. L. Turnbull, who secured the Inter-Club Challenge Cup, at the Midland Meeting, on Saturday last.

NORFOLK & NORWICH AERO CLUB

REPORT for week ending June 10.—Total flying time, 10 hrs. 55 mins. Instruction (with Mr. Young) : Messrs. E. Varden Smith, N. Lindley, A. J. K. Finch, A. Cooper, H. P. Clarke, H. Cator, F. Rinder, F. W. Palmer.

Soloists : Messrs. E. Varden Smith, R. T. Harmer, G. Barker, N. Brett, H. Mack, H. Pank, E. Lambert, R. F. Potters, W. P. Cubitt.

Passengers : Eight.

Flying time slashed all to pieces this week by the perfectly filthy weather we have experienced. Wind, rain, and more wind is the present programme, and as soon as the wind stops it rains again, and so on. We are bothered to know what one is to do with 350 members when it rains. That is, if they should by any chance all come up at once.

We regret to announce the death of Miss A. L. Rice this week. Miss Rice was an active member in every respect and had been the donor of many gifts to the Club from time to time, apart from the splendid work she had done on the social committee. It will be recalled that last year Miss Rice acted as Sheriff's Lady to her brother, Capt. A. A. Rice, the Chairman of the Club, and became during her year of office extremely popular. Out deepest sympathy is extended to the family in their sad bereavement.

Please note.—The manager of the club is now Basil Young, in place of Mr. Gough.

FROM THE FLYING SCHOOLS

The De Havilland Flying School, Stag Lane Aerodrome

REPORT for the week ending June 10.—Total flying time, 109 hrs. 5 mins. Instruction (dual), 37 hrs. 10 mins.; (solo), 34 hrs. 55 mins. Other flying, 37 hrs.

The week has been rather uneventful, except for one excellent first solo.

Several new pupils have joined the school, including an Indian baronet, Sir Chinubhai Madholal Ranchhodiat, who was so delighted with the "Moth" that he immediately placed an order for one.

Ten new "Moths" were tested during the week, so keeping our delivery programme up to date.

A new D.H. 61 made its maiden flight, and has now been despatched to Canada.

A great deal of time is being spent in carrying out time tests for Messrs. Rolls Royce, Ltd., on their latest engine, which is fitted in a D.H. 9A machine.

Over the week-end "Moths" were very much in evidence at The Midland Aero Club Meeting at Castle Bromwich Aerodrome, and scored notable successes.

Henderson Flying School, Brooklands Aerodrome.

REPORT for the week ending June 7.—Total flying time for week, 37 hrs. 10 mins.

Dual (with Capt. H. D. Davis) : Miss Kidstone, Messrs. Carlos, Anderson, Matos, Crabtree, Bennett, Bellamy, Payne, Saunders Gillard, Norbury. (With Capt. W. F. Davenport) : Messrs. Matos, Bellamy, Brooks.

Solo : Messrs. Oliver, Crabtree, Allen, Carlos, Payne, Dr. Wall.

The last two days of the week have brought the flying time down considerably, but the good work put in during the early part of the week more than compensates this.

Mr. Carlos made a record on going up to 7,800 ft. and down in under 30 mins. He has now completed all flying tests for his R.A.C. certificate. This performance speaks well for the H.F.S. Renault Avro.

Mr. Payne and Dr. Forsyth sent solo and made the usual H.F.S. three-point landings.

Col. Henderson had some bad luck on Derby Day. He made a forced landing near Cobham and ran into a flock of sheep, killing six and turning his machine complete with photographer on its back. As the surrounding country was a mass of trees, he had Hobson's choice of a landing ground.

147 passengers have been carried during the week.

committee had dealt with a charge of low flying and breach of the by-laws. His resignation was offered and accepted. Capt. E. W. Leggett, M.C., their chief instructor, has decided to remain with the club after being selected for and offered the post of Superintendent of Flying Operations in the Commonwealth. His decision is regarded as the best possible evidence of faith in the club's future. Many valuable taxi flights have been carried out by the Brisbane Flying School on D.H. "Moths." An urgent call was answered at Too-woomba, and in 42 hours a passenger was flown to his destination, Camoomeal, whereas travelling by ordinary means would have taken him eight days. On the return trip a 660-mile stage from Longreach to Brisbane was flown in one day. The total distance covered by the taxi-plane was 2,550 miles in 4½ days.

THE MIDLAND AIR PAGEANT

ONCE again the Midland Aero Club is to be congratulated on the very successful and excellent programme presented on the occasion of its Air Pageant, the second edition of which was held at Castle Bromwich Aerodrome on Saturday last, June 9. As in last year's pageant, the organisation was perfect, and, with one exception, the full programme was

heavy rain-storms tried to damp our enthusiasm—but not, we think, with much success. Otherwise, the weather was very pleasant, and the sun put in frequent appearances, while the clouds, sometimes of imposing formation, rather added to pictorial effect of the surroundings.

The high and bumpy wind naturally rendered the work of



[“FLIGHT” Photograph]

THE MIDLAND AIR PAGEANT : A portion of the machine park, and some of the crowd at Castle Bromwich Aerodrome.

carried through according to plan, without a hitch and, in almost every case, dead on time.

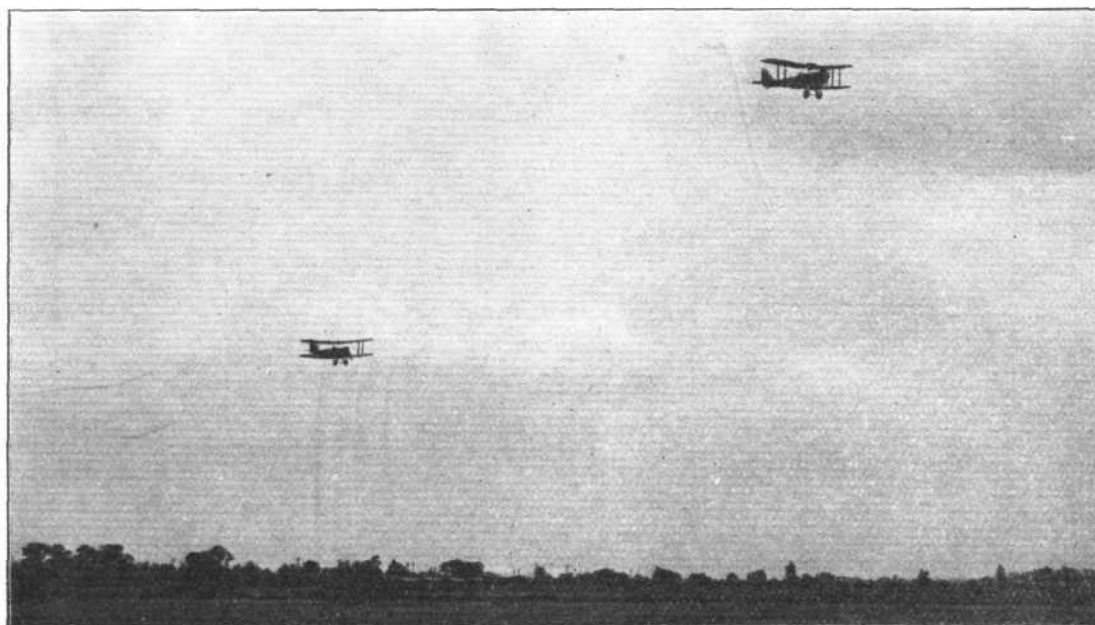
While the attendance, as far as we could see, did not reach the huge figure of last year, Saturday's "gate" was, nevertheless, a very big—and we hope satisfactory—one. The arrangement of the various enclosures was slightly different this time, and it was therefore difficult to compare the two meetings as regards the number of spectators.

As regards the weather, this was by no means ideal for a flying meeting, but was not so bad as to interfere at all seriously with the enjoyment of the spectators or the carrying out of the programme. There was an extremely gusty and strong wind blowing most of the time, and two or three

the competing pilots somewhat hard and reduced the speeds in the races, but, on the other hand, it helped some of the pilots to accomplish some wonderful demonstrations of exhibition flying, even though it made them more difficult of execution.

Among those present to witness the afternoon's programme were the Lord Mayor of Birmingham (Alderman A. H. James), who is president of the Midland Aero Club, and his party, and Flight-Lieut. Webster, winner of the Schneider Trophy—in addition to many well-known personalities of the air.

For the racing events the same course, some 12 miles in length, over the surrounding country was employed, in one case only one lap being flown, and in the others two laps.



[“FLIGHT” Photograph]

The Midland Air Pageant : Event 1, the finish of the Midland Inter-Club Handicap. F. L. Turnbull, on the Newcastle Club "Moth," 'PT, crosses the line first, with Norman Jones, on the London Club "Moth," 'WI, second.

As there was a fairly large entry for each of the main competition events—the Midland Inter-Club Handicap, the Air League Challenge Cup, the Midland Open Challenge Cup, and the Balloon Bursting Competition—preliminary heats for these were flown on Friday, June 8, and on Saturday morning. In the Open Challenge Cup, for instance, there

Heat 3.—(1) Capt. H. S. Broad on D.H. "Moth X-Cirrus II," 'XG; 20 mins. 36½ secs. (85½ m.p.h.). (2) Flight-Lieut. Soden on Parnall "Imp-Genet," 'TE; 20 mins. 40½ secs. (89½ m.p.h.). (3) Miss C. R. Leathert on Sopwith "Grasshopper-Anzani," 'AIN; 21 mins. 57½ secs. (68½ m.p.h.).
Heat 4.—(1) B. Martin on D.H. "Moth X-Cirrus II," 'SK;



["FLIGHT" Photograph]

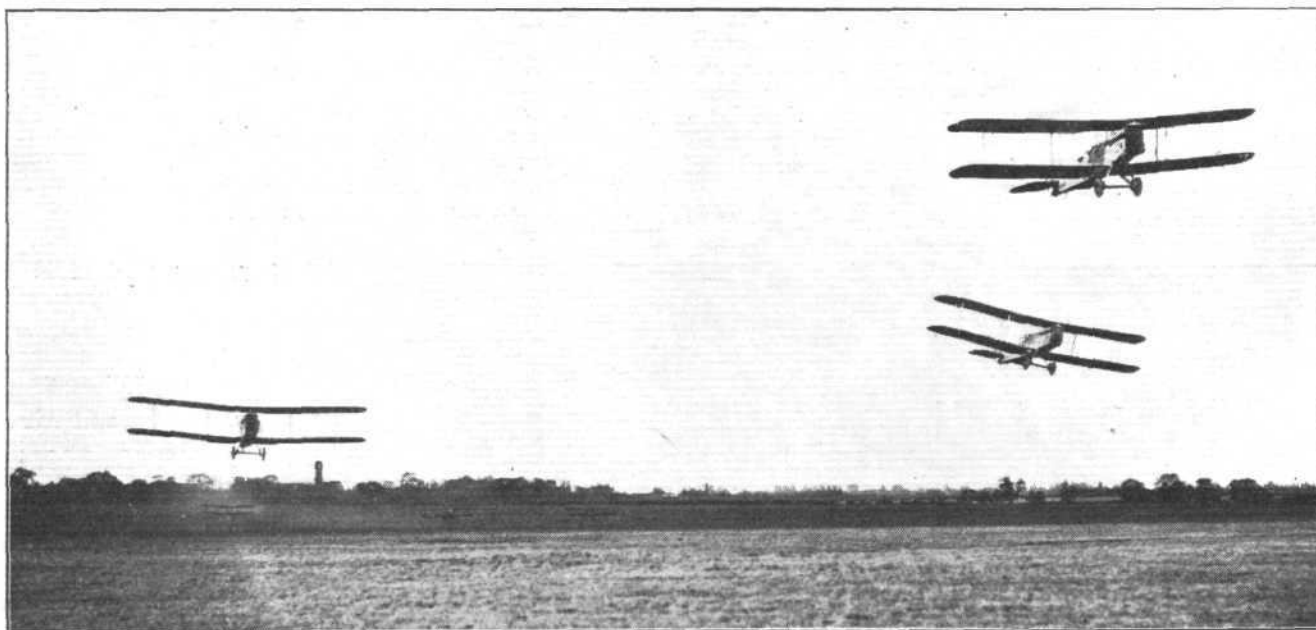
THE MIDLAND AIR PAGEANT: The start for the Midland Open Challenge Cup race. Three "Moths" take off together—Broad on 'XG, Martin on 'SK, and Bartlett on 'TV.

were 27 entries, and so five preliminary heats were flown to decide the final "runners." As a matter of interest we will give the results of these five heats, which were as follows:—

Heat 1.—(1) Capt. T. N. Stack on D.H. "Moth X-Cirrus II," 'UF; 21 mins. 5 secs. (85½ m.p.h.). (2) Flight-Lieut. G. Thorn on Avro "Avian-Cirrus II," 'QN; 21 mins.

20 mins. 52 secs. (83½ m.p.h.). (2) G. E. Lowdell on Blackburn "Bluebird II-Genet II," 'RE; 21 mins. 12 secs. (74½ m.p.h.). (3) Flight-Lieut. Paget on Westland "Widgeon-Cirrus II," 'RO; 21 mins. 15½ secs. (84½ m.p.h.).

Heat 5.—(1) H. Brooklyn on Westland "Widgeon-Genet II," 'RQ; 20 mins. 10½ secs. (90½ m.p.h.). (2) E. B. W. Bartlett



["FLIGHT" Photograph]

THE BIRMINGHAM "SKY-TERRIERS": No. 605 County of Warwick (Bombing) Squadron, take off to bomb the "Derelict Fort" (no natives, by request!).

27 secs. (90½ m.p.h.). (3) Miss W. S. Brown on Avro "Avian-Cirrus II," 'VZ; 22 mins. 3 secs. (78½ m.p.h.).

Heat 2.—(1) Norman Jones on D.H. "Moth X-Cirrus II," 'WI; 21 mins. 58 secs. (83 m.p.h.). (2) F. R. Mathews on D.H. "Moth-Cirrus I," 'MP; 21 mins. 56½ secs. (71½ m.p.h.).

on D.H. "Moth X-Cirrus II," 'TV; 20 mins. 11½ secs. (85½ m.p.h.). (3) J. D. Parkinson on D.H. "Moth X-Cirrus II," 'PT; 20 mins. 18½ secs. (84 m.p.h.).

The preliminary heats for the Inter-Club and the Air League Challenge Cup races left six competitors for each event—these



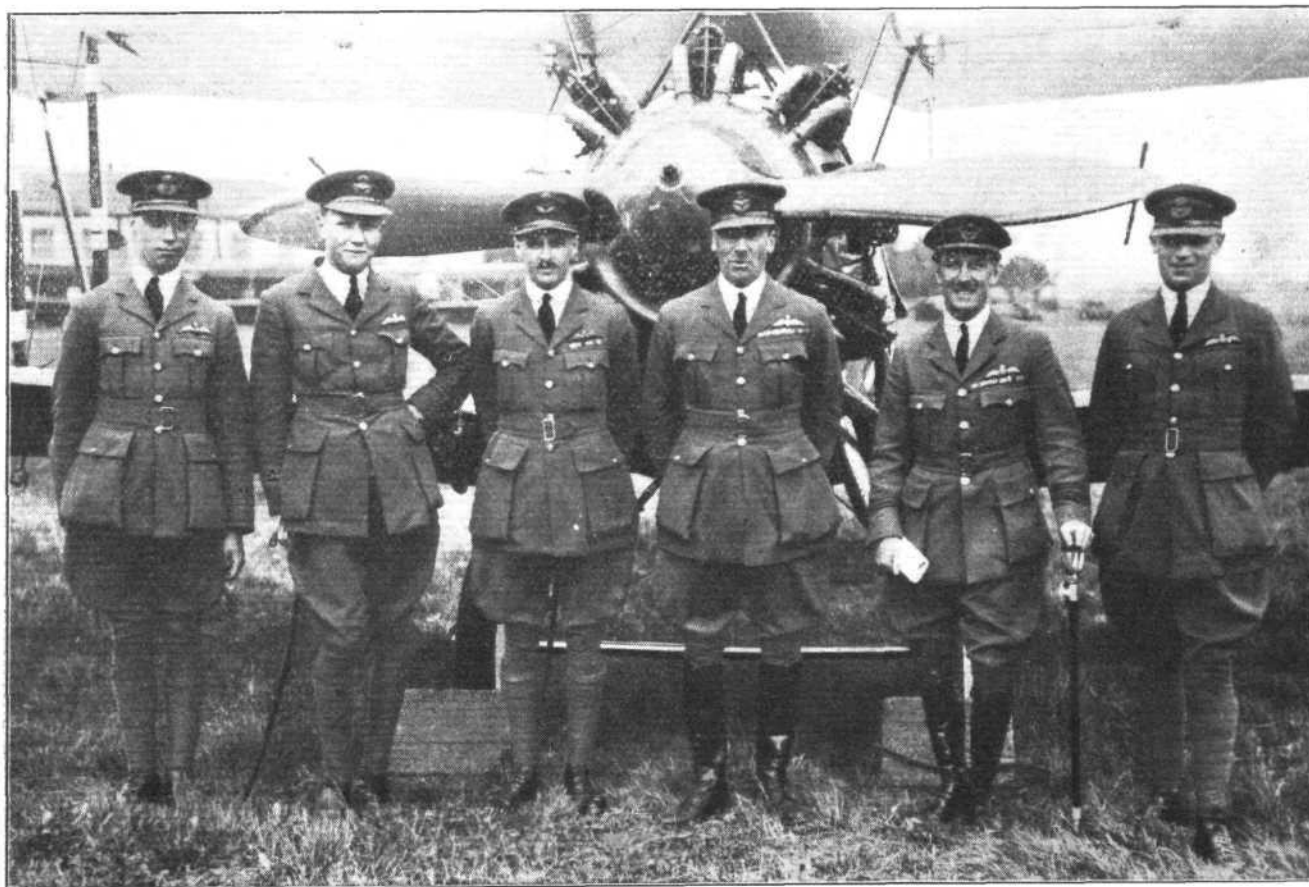
[" FLIGHT " Photographs]

THE SERVICE SHARE OF THE MIDLAND PAGEANT : The Gloster " Gamecocks " (Bristol " Jupiter ") from No. 43 (Fighter) Squadron, Tangmere, played a prominent part in the Pageant Programme. Our picture shows (top), three " Gamecocks " giving a demonstration of close formation flying, and (below), the machines parked.

will be given later—while out of an entry of 23 for the Balloon Bursting competition, five were chosen for the final. It will be seen, therefore, that on the Friday and during the Saturday

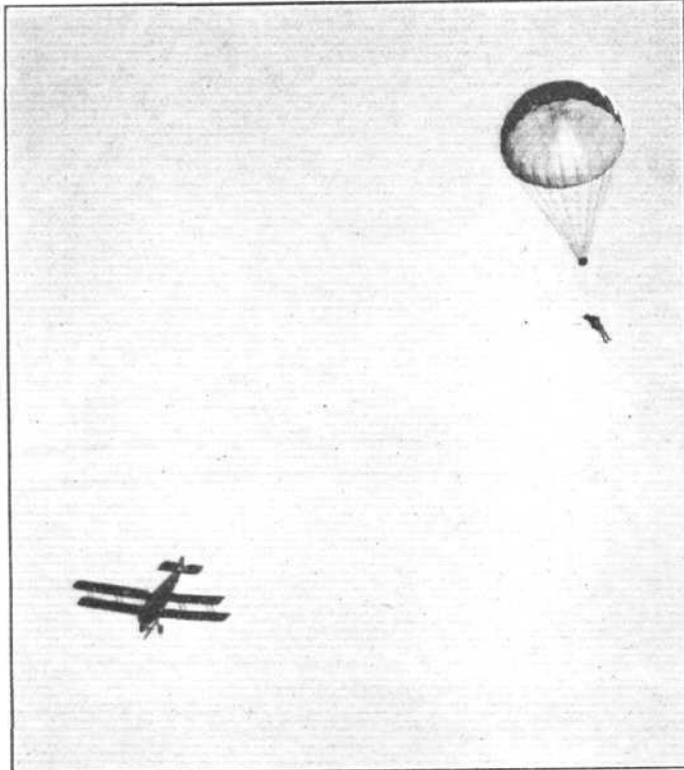
morning there was plenty of fun to be seen for those enthusiasts who happened to turn up at the aerodrome during that period.

The Pageant programme proper, however, opened



[" FLIGHT " Photograph]

THE R.A.F. AT THE BIRMINGHAM PAGEANT : Pilots of No. 43 (Fighter) Squadron added considerably to the brightness of the meeting with their Gloster " Gamecocks " (Bristol " Jupiter "). From left to right are:—P./O. Leech ; F./O. H. C. O. Hayter ; Flight-Lieut. A. C. Collier ; Wing Commander Tyssen, M.C. ; Sqdn.-Ldr. C. N. Lowe, M.C., D.F.C. ; and F./O. N. A. P. Pritchett.



[“FLIGHT” Photograph]

PARACHUTING FOR A LARK : Miss June invented a new sport at the Midland Pageant. In descending from an Avro with her “Guardian Angel” parachute, as shown above, she caught a lark in the “cup” of the parachute.

punctually at 2.30 p.m. on Saturday with a shower of rain, and the start for Midland Inter-Club Handicap final (one lap), in which six competitors started, as follows :—

Midland Inter-Club Handicap

First Prize—Midland Inter-Club Challenge Trophy, and £25 ; second prize, £10 ; third prize, £5.

Pilot and Entrant.	Machine and Engine.	Handicap, mins. secs.
S. H. Smith (Midland Ae.C.) ..	“Moth-Cirrus 1” ‘LT’ ..	1 27
Miss W. E. Spooner (London Ae.C.) ..	“Moth-Cirrus 1” ‘OT’ ..	1 07
R. D. Bednell (Midland Ae.C.) ..	“Moth-Cirrus 1” ‘LW’ ..	0 57
F. L. Turnbull (Newcastle Ae.C.) ..	“Moth-X-Cirrus 11” ‘PT’ ..	0 27
Miss W. S. Brown (Lancashire Ae.C.) ..	“Avian III-Cirrus III” ‘VZ’ ..	0 26
Norman Jones (London Ae.C.) ..	“Moth X-Cirrus II” ‘WI’ ..	Scratch

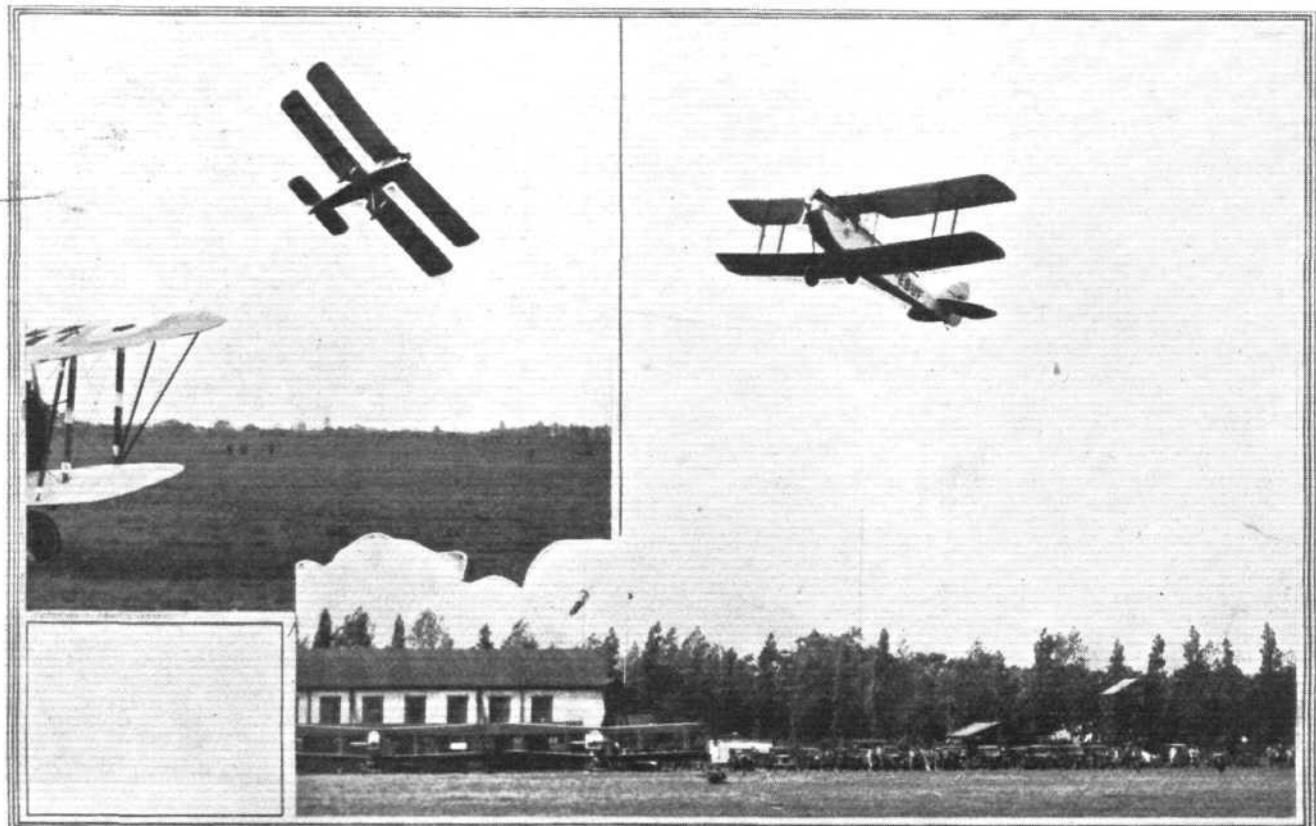
It was obvious to all that each competitor as he, or she got away was feeling the bumps pretty severely, but they all took off and proceeded on their way in excellent style, and were soon out of sight.

As soon as the scratch man had left, event No. 2 was proceeded with—this being an exhibition of inverted flying by E. G. Lowdell on a Blackburn “Bluebird,” fitted with an Armstrong-Siddeley “Genet” engine. It was quite an interesting display, in which the pilot repeatedly turned the “Bluebird” over on to its back and flew thus for several seconds. Just as he was concluding his exhibition, some of us were taken unawares by the return of the “Inter-Clubites.”

The first of these to cross the line was Turnbull, on the Newcastle “Moth” ‘PT’, whose time was 10 mins. 24½ secs., and average speed 80 m.p.h. Close behind was Norman Jones (London) on “Moth” ‘WI’, with 10 mins. 28½ secs., and 83 m.p.h. Miss Winifred Brown came in a close third, on the Lancashire “Avian,” with 10 mins. 37 secs., and 78 m.p.h. As to the others, we lost them altogether, and did not see them come home in the confusion of the other machines circling to land.

Event 3 followed promptly to time, and comprised a very interesting “Instructional Demonstration” by Flt.-Lieut. W. R. Cox, Adjutant of No. 605 County of Warwick (Bombing) Squadron, on an Avro-Lynx. He first showed us how to take off across wind (and there was plenty of it), a useful procedure when one wishes to get out of a confined space. He then demonstrated such evolutions as the spin, the loop, the half-roll, the side slip, and finally a cross-wind landing (while the wind was still plentiful as well as cross!).

Capt. Neville Stack—who, with Mr. B. S. Leete made history with their light ‘plane flight to India—then gave us a remarkable display of aerobatics on the ADC “Moth” G-EBUF. He looped, rolled, and spun his machine at very



[“FLIGHT” Photographs]

CRAZY FLYING—SLOTTED AND OTHERWISE : Sqdn.-Ldr. Noakes (left) adds a few new spasms to his repertoire of crazy flying on the Avian with Handley-Page slots. On the right, Capt. Stack also did some “loopy” flying, without the aid of slots, on the D.H. “Moth” (A.D.C.)

low altitudes, and in fact seemed to do just what he liked with the machine.

No sooner had we persuaded our hairs to settle down than a flight of three Gloster "Gamecocks" from No. 43 Fighter Squadron (Tangmere), led by Sqdn. Leader C. N. Lowe, M.C., D.F.C., with Flt.-Lieut. Collier, Flying-Officer Pritchett, and/or Flying-Officer Hayter, took off and gave us one of those delightful demonstrations of close formation flying for which the R.A.F. are now world famous. In spite of the high wind, they carried out most of the evolutions, with wing-tip almost touching wing-tip, which we have had the pleasure of seeing before at the R.A.F. Display, the Hamble Pageant, and elsewhere, but they wisely, we think, did not attempt the "inter-leaved spin."

After this—still on time—came the final of the Air League Challenge Cup (2 laps), in which five started, as follows:—

Air League Challenge Cup

First Prize, Challenge Cup and £50 presented by the Duke of Sutherland; second prize, £25; third prize, £10.

Pilot and Entrant.	Machine and Engine.	Handicap mins. secs.
R. L. Jackson (Midland Ae.C.)	"Moth-Cirrus I" 'LW	3 26
F. L. Turnbull (Newcastle Ae.C.)	"Moth-X-Cirrus II" 'PT	2 13
Miss W. Brown (Lancashire Ae.C.)	"Avian-Cirrus II" 'VZ	1 51
Norman Jones (London Ae.C.)	"Moth X-Cirrus II" 'WI	0 59
H. Brooklyn (Haltan Ae.C.)	"Widgeon-Genet II" 'RQ	0 31

Flight-Lieut. Le Poer Trench on the H.A.C. II was a non-starter.

While they were away on their first lap, Capt. H. A. Brown gave a thrilling exhibition on a slotted Avian, which included extraordinary hoverings and loops and half loops close to the ground.

Meanwhile, the racers concluded their first lap: 'LW was still in front, but 'WI and 'RQ had obtained second and third places respectively, 'VZ being fourth and 'PT last. At the end of the final lap, 'RQ had obtained the lead, having passed both 'WI and 'LW—the latter now being third. 'VZ and 'PT remained as before, fourth and fifth. The result of the Air League Challenge Cup race was therefore as follows:—(1) H. Brooklyn, 20 mins. 10 secs. (90½ m.p.h.). (2) Norman Jones, 20 mins. 16½ secs. (87½ m.p.h.). (3) R. L. Jackson, 20 mins. 40 secs. (75 m.p.h.).

Next came an individual aerobatic display by Flt.-Lieut. A. C. Collier, on a Gloster "Gamecock." When we say this was up to the usual R.A.F. standard, we have said about all that can be said. This pilot executed loops, rolls, spins, upside-down flights and all the other evolutions which not so very long ago would have been considered impossible.

He concluded his splendid performance in a heavy rain storm.

With the rain, also came a slight break-up in the programme; the next event down (No. 9) was the parachute descent, but conditions just then were, of course, such that an event of this character was out of the question. Then again, Event 10 was to have been a demonstration of speed by Flt.-Lieut. Luxmore on the Avro "Avenger" (Napier "Lion"), but for some reason unknown this event did not materialise. There was, however, an excellent "Deputy."

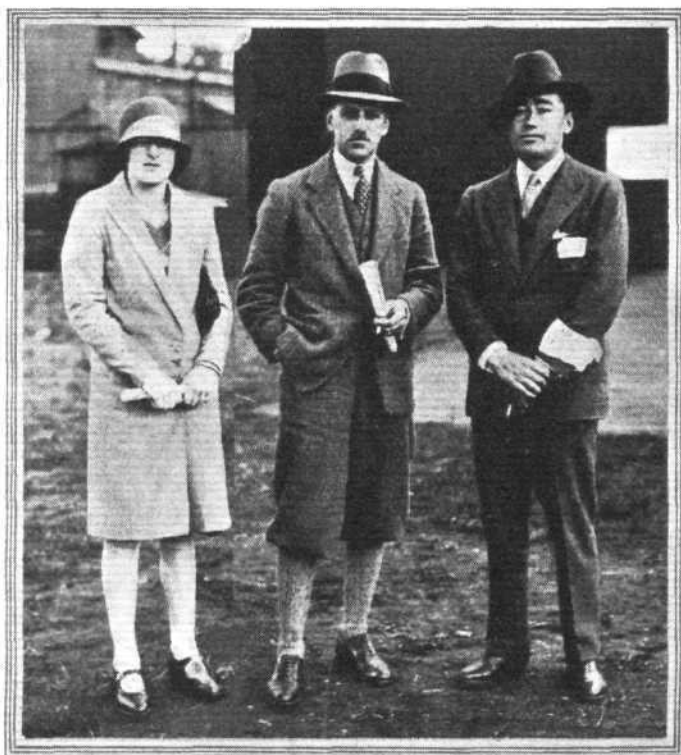
This was a demonstration of Crazy Flying by Squadron Leader Noakes on an Avro "Avian III" ("Cirrus II" engine) fitted with the Handley Page slotted wings. Noakes *au naturel* was always a dish that required some effort to swallow—but with *sauce à la Slot*! Well, we still feel somewhat uncertain as to what actually happened, if it did, during that remarkable Jazz round the Aerodrome. Anyway, if we tried to describe it, we doubt if the words required could be found even in the new Dictionary!

However, we were brought to earth by the next event, a "Ground Strafe" in which our R.A.F. friends, in the "Gamecocks" surprised a "hostile tank" (we feel certain it was last year's Turkish Bath cabinet), and bombed it by converging attack methods. Incidentally, one of the bombs—or part thereof—endeavoured to obtain a free flight on the Imperial Airways Handley Page engaged in passenger carrying, for after leaving the "Gamecock" it made its way through the fuselage of the H.P. and stowed itself away in the luggage compartment!

We now come to Event No. 12, the final of the balloon-bursting competition. The high wind rather upset this event, for when the bunch of balloons was released they were carried rapidly out of sight—except for those who had glasses. However, five pilots took turns at attempting to destroy as many of each bunch of nine as they could. The first two, J. D. Parkinson on "Moth" 'P.T., and a second "Moth" (we failed to identify) each accounted for five. Somebody—Flight-Lieut. Worsley, according to the programme—on the Parnall "Imp," came next, but only succeeded in "Imp"-aling one. Flight-Lieut. Paget, on "Widgeon" 'RQ, and A. Goodfellow, on "Avian" 'RR, followed with 2 and 3 respectively.

Event 13 was respectfully ignored by the organisers.

It was now just on 5 o'clock, and the wind having somewhat calmed down it was announced that Miss June would make her parachute descent. She went up in an Avro piloted by Capt. Muir, of the Surrey Flying Services. Having climbed



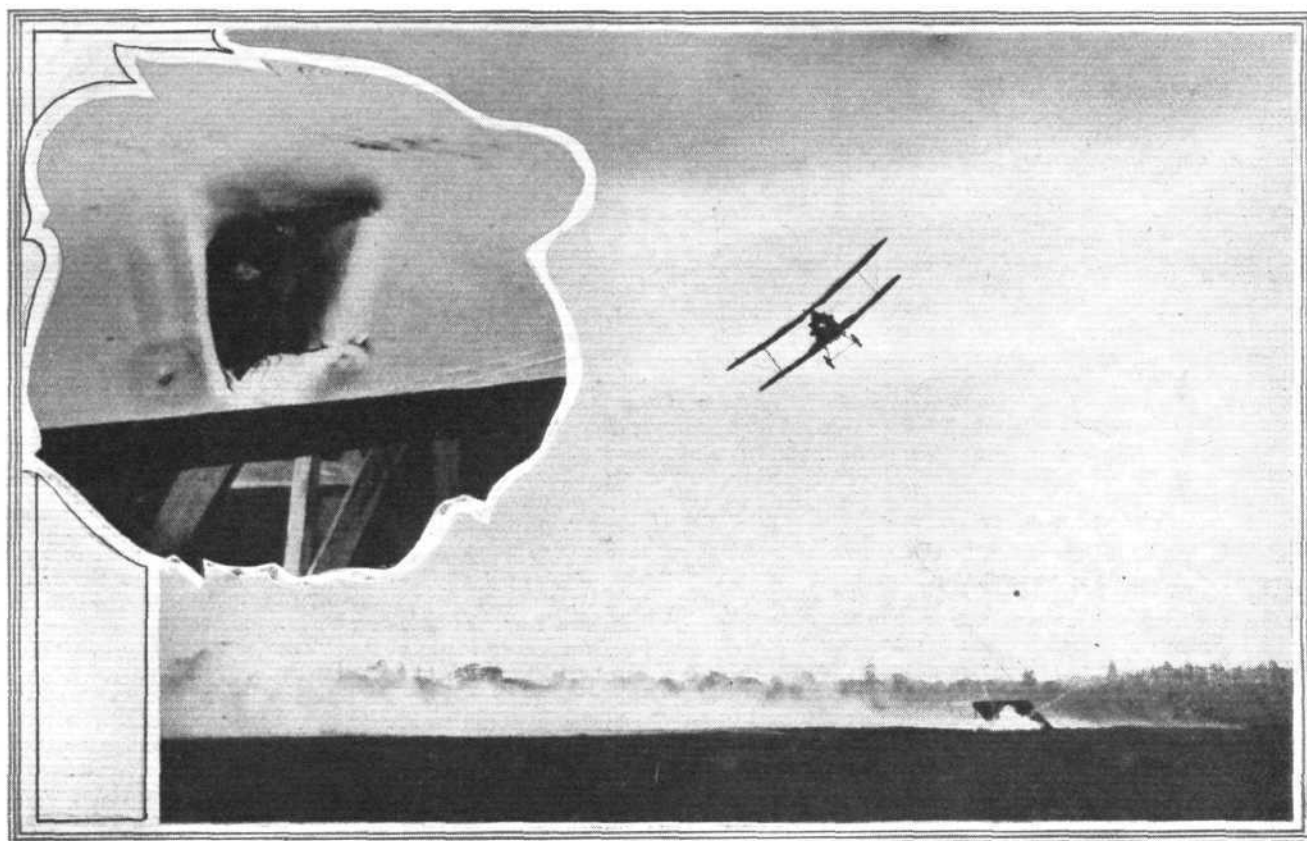
["FLIGHT" Photograph]

AT THE MIDLAND PAGEANT: Miss Mollie Darby (left), Col. M. O. Darby, O.B.E. (Judge), and (right) Marqués de Córdoba, who is visiting this country from Spain to purchase aircraft.



["FLIGHT" Photograph]

THE NEWCASTLE TEAM AT BIRMINGHAM: On the left, Flight-Lieut. Turnbull, winner of the Inter-Club Handicap, and J. D. Parkinson, who represented the Newcastle Aero Club.



["FLIGHT" Photographs]

REALISTIC BOMBING AT BIRMINGHAM: One of the R.A.F. Gloster "Gamecocks" bombing the hostile "tank"—a direct hit; Insert, an indirect hit—but not on the tank. This is a hole made by the nose cap of one of the bombs in the fuselage of the Imperial Airways Handley Page, which was busy taking up "joy-riders" during the Pageant.

to an altitude of about 1,000 ft., Miss June was seen to climb over the side of the machine, and, when just over the boundary of the aerodrome, jump. Her "Guardian Angel" parachute opened instantly, and she made a very graceful "drop," landing quite close to the enclosures. During her journey down she caught a lark in the parachute, but after landing she secured it and set it free (having first provided it with some food) none the worse for the adventure.

Event 14 was a demonstration of the slotted wing by Capt. Hubert Broad on "Moth X" 'XG. It was certainly a very wonderful exhibition, especially when he headed into the wind and hovered motionless over one spot for an appreciable time, and then even drifted backwards. Unfortunately, his demonstration was curtailed, owing, we understand, to a temporary jamming of one of the slots.

After this came the final (2 laps) for the Midland Open Challenge Cup—for which, as previously stated, there was a large entry. The finalists were as follows:—

Midland Open Challenge Cup

First prize, Cup and £100 presented by Sir Charles Wakefield; second prize, £25; third prize, £10.

Pilot and Entrant.	Machine and Engine.	Handicap, mins. secs.
H. S. Broad (De Havilland Aircraft)	"Moth X-Cirrus II" 'XG	3 12
B. Martin (Notts. Ac. Club)	"Moth X-Cirrus II" 'SK	3 12

E. B. Bartlett (Bristol Ae. Club)	"Moth X-Cirrus II" 'TV	3 12
T. N. Stack (A.D.C. Aircraft)	"Moth X-Cirrus II" 'VF	3 1
Norman Jones	"Moth X-Cirrus II" 'WI	2 41
H. Brooklyn	"Widgeon-Genet II" 'RQ	2 15

This provided another good race, with quite a good finish. Stack managed to overhaul the first three "Moths," and came in first with 17 mins. 5½ secs. (88½ m.p.h.), Martin being the only one of the trio to obtain a place, which was second, with 17 mins. 12½ secs. (87 m.p.h.). Brooklyn, on the "Widgeon," was third, with 17 mins. 36 secs. (90½ m.p.h.).

During the first lap of the above race Capt. Louis Paget gave a splendid exhibition of stunting on the Westland "Widgeon."

After the race the Surrey Flying Services gave their demonstration of wing-walking—which consisted of flying an Avro round the aerodrome, while two men walked along the lower plane to the wing tips and back to the fuselage.

A really enjoyable meeting was brought to a conclusion by a "set piece," which consisted of the bombing and destruction of a fort—not a hostile one, this time, crammed with gaily-coloured "natives," but derelict!—by the Birmingham "Sky-Terriers," i.e., No. 605 County of Warwick (Bombing) Squadron. The squadron (D.H. 9A's), under Sq. Ldr. Cecil Wright, took off in formation, and then flew over the fort, discharging their bombs with remarkably good effect.

Royal Air Force Flying Accidents

THE Air Ministry regrets to announce that as the result of an accident at Invergordon to a Southampton flying-boat of No. 480 (Coastal Reconnaissance) Flight, Calshot, on May 10, 347098, Corporal Ernest Bradford, a passenger, was killed, and Flight-Lieutenant Alick Charles Stevens, the pilot of the aircraft, sustained minor injuries. The two other occupants of the Aircraft were uninjured.

As the result of an accident at Old Sarum, Wiltshire, to a Bristol Fighter machine of No. 16 (Army Co-operation) Squadron, Old Sarum, on May 11, Flying Officer Gerald Arthur Underdown, the pilot of the aircraft, and 370390, L. A. C., Donald Martin Thomas were killed.

As the result of an accident at Farnborough, Hants, to a Fairey 3.F machine of No. 446 (Fleet Spotter Reconnaissance)

sance) Flight, H.M.S. "Courageous," on May 12, 363057 A.C.1 John George Bolton, Royal Air Force, was killed, and J.70337 Telegraphist Percival Reginald Carter, Royal Navy, sustained injuries from which he died in hospital on the same day. Capt. Edward James Osborne Ellison, Royal Marines, Flying Officer, Royal Air Force, the pilot of the aircraft, was seriously injured.

Air Mail Records

THE Franco-South American mail which left Toulouse at 6 a.m. June 8 reached Dakar at 6 p.m. the following day, the distance of 2,927 miles being thus covered in 36 hours. For the first time the French mail was delivered at Dakar on the day after its departure. Air mail which left Rio de Janeiro at 9 a.m. June 9 reached Pernambuco in the evening in air mail aeroplanes, which covered the distance in 16 hours.

THE CURTISS "CHIEFTAIN" ENGINE

A 600-H.P. Air-Cooled Radial of Novel Design

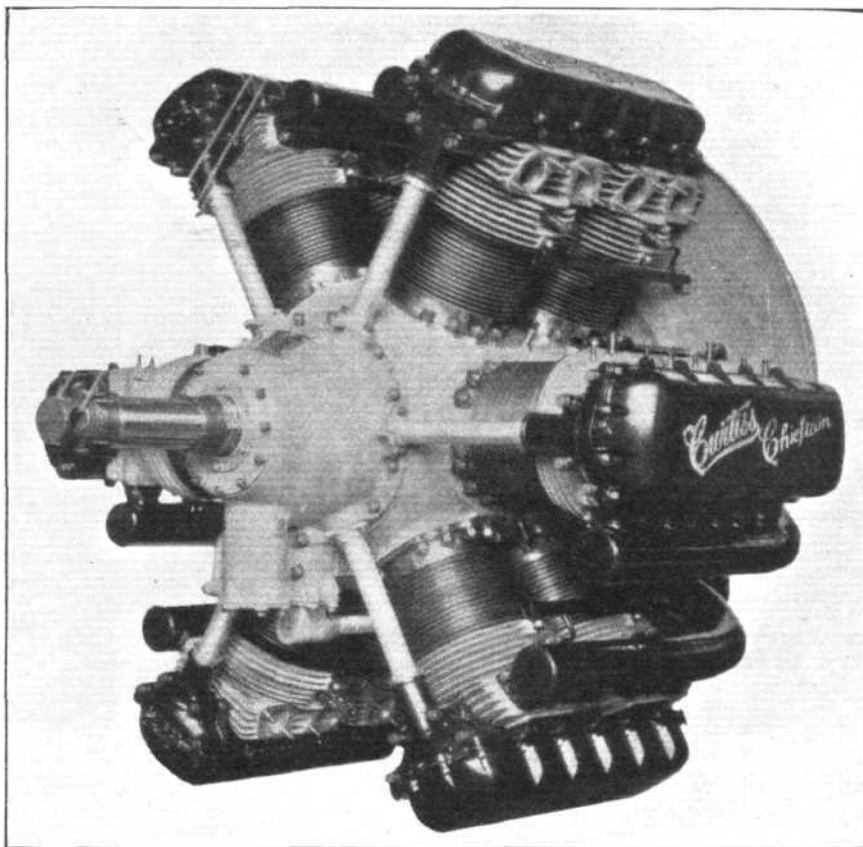
By ERIK HILDESHEIM

In the American National Advisory Committee for Aeronautics Annual report for 1927 the first reference was made to a new "Hex" engine of the Curtiss Aeroplane and Motor Co., Inc. The name stood as an abbreviation for "hexagonal," to indicate the new cylinder arrangement of this latest radial aero engine, which has now been finally named "Chieftain."

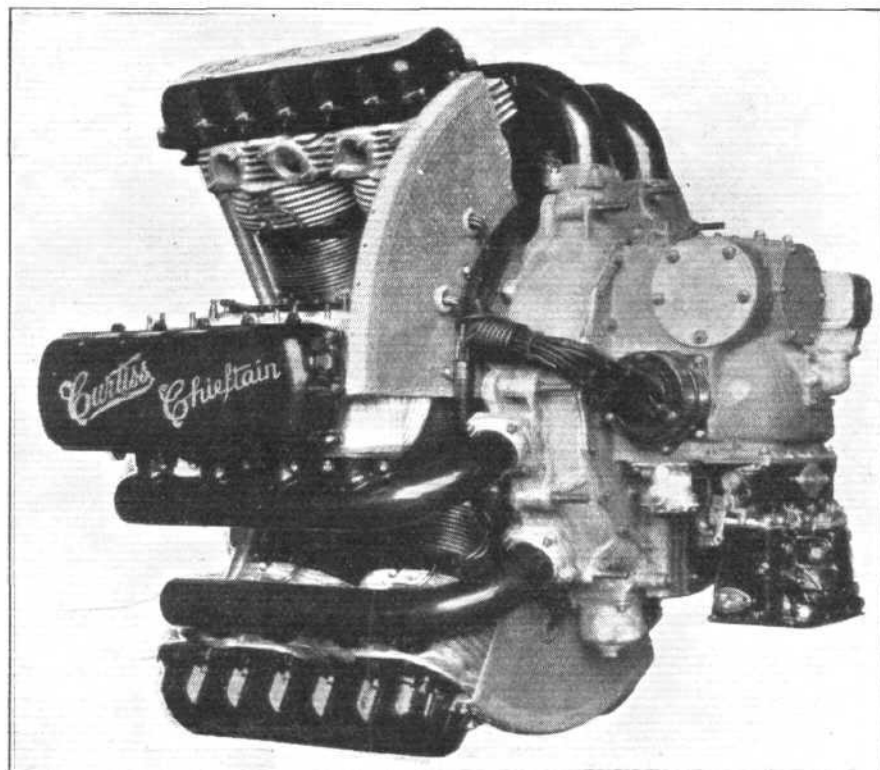
The Curtiss company has, in thus entering the field of air-cooled engines, had the co-operation of the United States Army Air Corps during the two years of development. Flight tests were begun immediately after the Detroit Aero Show, at Mitchel Field, the Army aerodrome on Long Island adjoining the Curtiss establishment at Garden City. The successful preliminary trials are to be continued by the Air Corps on Wright Field, Dayton, Ohio. The first "Chieftain" has been installed in a standard two-seater Curtiss "Falcon" observation and attack biplane. The test flights were carried out by Lieut. H. P. Gaines, the Army pilot stationed at the Curtiss factory, and by the company's veteran test pilot "Casey" Jones.

It is emphasised that for the first time has the substitution of a radial air-cooled aero engine for a water-cooled edition not only resulted in improved performance with regard to increased climb and ceiling, but the usual simultaneous sacrifice of several miles per hour in top speed has at the same time been overcome. The "Falcon" maintained the same speed as attained previously with the Curtiss D.12 water-cooled V type engine, viz., 158 m.p.h. The D.12 is, it will be remembered, of specially narrow construction. A comparison of the two power plant installations brings out the fact that the water-cooled engine type scores in permitting a narrower fuselage beam, but has head resistance added by the radiator underneath.

Developing 600 h.p., the Curtiss "Chieftain" is not only the highest-powered radial aero engine that has so far been produced in America, but the design differs from all previous



THE NEW CURTISS "CHIEFTAIN" ENGINE: Three-quarter front view. The unusual cylinder arrangement should be noted.



THE NEW CURTISS "CHIEFTAIN" ENGINE: Three-quarter rear view. The engine is fitted with a supercharger.

practice in cylinder arrangement. Instead of having one row of cylinders arranged radially, as in the Bristol, Wright and Pratt & Whitney types, or the offset two-row arrangement of the Armstrong-Siddeley "Jaguar" and adopted by Lorraine-Dietrich the "Chieftain" has two rows of cylinders, one behind the other with six cylinders arranged hexagonally in each row. This arrangement permits a common overhead camshaft drive for each two cylinders as in the water-cooled in-line type of engine, and reduces the overall diameter of the engine, which means again less head resistance and increased high speed. The frontal area per horse-power of the "Chieftain" is claimed to be about half that of the conventional 9-cylinder air-cooled radial. In fact, the overall dimensions of the 600-h.p. "Chieftain" is, with 45 ins., the same as for the 220-h.p. Wright "Whirlwind."

FLIGHT has been privileged by the makers to inspect, through a correspondent, the engine at Mitchel Field, N.Y., and to be first in Europe to publish details about this interesting engine development.* It is stated that no difficulties have been experienced so far in keeping the rear cylinders cooled. The confirmation of this in further extensive tests is of no little importance, as there should then be no objection to increasing the number of cylinders in line to four.

* Unfortunately pressure on our space has prevented publication until now, although the article has been in hand for several weeks.—ED.

Maintaining its low head resistance, the engine would then, with 24 cylinders, not be longer than the Napier "Lion" "broad-arrow" of three times four cylinders, and equal in power developed with the "X" type 1,200-h.p. Packard water-cooled engine having the same number of cylinders, and which is now claimed to be the world's largest aero engine.



AIR-COOLED VERSION : The Curtiss "Falcon" fitted with the new "Chieftain" engine.

Below follows the main specification of the 600-h.p. Curtiss "Chieftain" hexagon type of radial air-cooled engine :—

Number of cylinders	12
Bore	5½ ins.
Stroke	5½ ins.
Displacement	1,640 cub. in.
Horse-power—		
Brake	615
Rated	600 at 2,200 r.p.m.
Fuel consumption at 2,000 r.p.m.	0.53 lb./h.p./h.
Oil consumption	0.020 lb./h.p./h.
Diameter of engine	45 ins.
Diameter of cowl	39 ins.
Engine weight	900 lb.
Ignition	Splitdorf magneto.
Carburettor	Stromberg.
Clockwise direct-drive propeller.		

[Our correspondent does not refer to several very interesting features of the Curtiss "Chieftain." For instance, it will be noted that the cylinders are not arranged in the manner usually adopted (apart, of course, from the tandem arrangement), with all cylinders alike as regards right-hand and left-hand. In one gap the exhaust ports face each other and in the next the inlets, then exhausts again, and so forth. In other words, the engine may be described as a

The Paris Aero Show

M. ANDRÉ GRANET, General Commissary of the XI French Aero Show, has announced that all stand spaces have now been booked at the Grand Palais, and that there only remain a few places on the first floor. This International Aero Show, which is to be held in Paris, at the Grand Palais, from June 29 to July 15, is sure to prove a success. Aircraft manufacturers from Germany, Great Britain, Holland, Italy, Czecho-Slovakia, and also from the United States, will take part. M. Guillet, Director of the École Centrale of Paris, has presented to the Academy of Sciences a communication

12-cylinder Vee type, cut into three four-cylinder vees, which are then placed around the crankcase. This somewhat curious cylinder arrangement obviously has not been chosen purely by accident, and an examination of the photographs shows that the exhaust vees are blanketed at the back, so that presumably the object has been to obtain a cooling arrangement somewhat similar to that used in early



WATER-COOLED VERSION : The Curtiss "Falcon" fitted with the Curtiss D.12 engine.

vee-type air-cooled engines, such as the Renault and R.A.F. engines. The louvres in the cowl aft of the engine as installed in the "Falcon," would appear to bear out this assumption.

Another query immediately comes to mind: It is a well-known fact that even firing cannot be obtained with an even number of cylinders whose connecting rods are taken to a common crank throw. The "Chieftain" has an even number of cylinders, and one wonders how the firing is arranged. Since we received Mr. Hildesheim's article some weeks ago, a most interesting article on the "Chieftain" has appeared in our New York contemporary *Aviation*. Written by Mr. Arthur Nutt, who is Chief Engineer of the Curtiss Aeroplane & Motor Co., Inc., this article throws a certain amount of light on the subject by the following passage: "When two rows of cylinders are used, it is possible to jump to the back row at the proper time and then back to the front row, getting even firing and satisfactory operation. It is also possible to fire all the front row and then jump to all the back row. The third possibility is to fire two cylinders in the front row, two in the back row, and then two in the front row, etc. However, of these three firing orders, the first named was found to be the smoothest and most satisfactory." Mr. Nutt also states in the course of his article that the radial was chosen partly because of the relative ease with which a reduction gear can be fitted without interfering with the cooling.—ED.]

concerning the properties of a new "nitricated" steel, which utilisation interests automobile and aviation industries. In order to demonstrate the applications of this special steel, a laboratory for experiments is to be installed at the Grand Palais, Paris, during the Aero Show, where visitors are sure to be greatly interested following the essays made.

Air Ministry Orders Blackburn "Ripons"

FOLLOWING on the recent demonstration at Brough with the Blackburn-Napier "Ripon" torpedo or bombing seaplane, the Air Ministry has placed an order for several of these machines.

BRITISH AVIATION'S BANQUET TO MR. A. V. ROE, O.B.E.

A BANQUET to Mr. A. V. Roe, O.B.E., F.R.Ae.S., M.I.A.E., was held on June 8, at the Savoy Hotel, by the Royal Aeronautical Society, The Royal Aero Club, The Air League of the British Empire, and The Society of British Aircraft Constructors. It was a tribute to Mr. A. V. Roe as the first British airman and to his valuable work for aviation for twenty-one years. In the Chair was Sir Charles Cheers Wakefield, C.B.E.

Sir Charles Wakefield, in the opening speech, said that when he was approached by Col. the Master of Sempill, on behalf of the four representative bodies governing aeronautics in this country, and asked to take the chair he was diffident. But it was perhaps a little fitting that he should preside, as he had been keenly interested in aviation for many years. As far back as 1910, he spoke at a city meeting, held in the Drapers' Hall, on behalf of the Aerial League of Great Britain, and the late Duke of Argyle and the late Sir Hiram Maxim were present.

They were assembled now, he said, to pay a long overdue honour to a man who had left his mark on world aviation. Mr. Roe had become famous in spite of that characteristic handicap of true genius—modesty. He had been content to let his actions speak for him. Continuing with a brief summary of Mr. Roe's career, he then said that, as a layman, but an enthusiastic layman, he was proud to pay his tribute of admiration to Mr. Roe's genius and to that of his able assistants who had been through his struggles and trials, namely, Mr. John Lord, Mr. Parrott and Mr. Chadwick.

Further, he expressed his gratitude to the brother, Mr. H. V. Roe, whose close co-operation took practical shape in 1910, and had immense value. He had thrown his financial genius and resources into the scale. When war broke out, although too old to be a pilot, he qualified as an observer, and was very badly injured at night flying while a member of the Independent Air Force. In conclusion, Sir Charles expressed the hope and firm conviction that Mr. A. V. Roe had a career before him as successful and honourable as that celebrated that night.

The toast to the guest of the evening was then given, and Mr. A. V. Roe rose to respond. Unfortunately, he was too anxious to be modest by being brief. Everyone would willingly have heard more of him, for he spoke lightly and humorously. As he had prepared an interesting speech, we are able to produce it here, so that it will include most of what he actually said, and most of what he had prepared himself to say.

He started life with an aviatric name and seemed destined for an aviatric career. His first flight occurred when he was only a few weeks old; flying into a rage.

When living at Patricroft, near Manchester, his brother, H. V., and himself were sent to a boarding school at Shepperton, strangely enough, near what was subsequently Brooklands track, the scenes of his early experiments. After serving an apprenticeship at the locomotive works at Horwich, near Manchester, he went to King's College, Strand, and then to sea as a marine engineer. It was while at sea that he became convinced it was possible to construct an aeroplane, after spending hours, fascinated, watching the Albatross gliding majestically, with motionless wings; and little did he then realise it was going to be his great privilege to take an active part in developing romantic dreams. The first effort was on the lines of the Albatross in model form, but it was too heavy, and then came a number of gliders from drawing paper and wood, with different aspect ratios, swept back wings, etc. After his return from U.S.A., he met Lord Montagu of Beaulieu in 1906, when he was the editor of *The Car*, and he thought they now have the office which he had then. He advised him to design a rigid airship, which he did. That airship was designed with a firmly secured ring in the nose, and a light trellis pole, tapered to a point at each end and covered with fabric to reduce head resistance, was to be carried and used as a mooring mast when on tour.

It was in 1906 that he applied for the post of Secretary of the Aero Club and was actually appointed, but did not take up duties as he got in touch with Mr. Davidson, and went to America for a while. Then the *Daily Mail*, towards the end of that year, astonished its readers by offering £250 in three prizes for power-driven model aeroplanes which had to fly a minimum distance of 50 ft. to be eligible for the prizes. At that time he had only made gliders, and within 10 days of the offer had built a 3-ft. x 3-ft. model driven by elastic obtained from his brother's mills at Manchester.

He was astonished when the *Daily Mail* announced there were over 200 competitors, and thought he would not have a chance. However, one of his models flew the full possible distance indoors and over 100 ft. out of doors, and he received the highest awarded prize.

T. W. K. Clarke was a close runner-up with his beautifully made models. He had a full-sized glider which was kept on some hills near Aldershot, and Mr. Roe had on several occasions attended the trials, which were not without alarms. The chief trouble, if he remembered correctly, was due to the front elevator being too small and near the main wings. The trials were carried out in a jolly atmosphere, as Clarke was always merry and bright. Mr. Clarke was now at the R.A.E.

Mr. Harold Perrin, as Secretary, was very much in evidence at that meeting. That delightful personality, Jose Weiss, who he regretted to say died a few years ago, was a competitor with his bird-like model which he had seen gliding from a hilltop outside Amberley, but it was too heavy for a hand launch on the level. Mr. W. Cochrane's all-metal model was also too heavy; it required discharging at about 60 miles an hour. Another model which caused a good deal of mirth was driven by a sky-rocket, a means of propulsion that may yet be employed some day. Mr. Roe next built a full-sized machine and took it to Brooklands when the racing season finished, in September, 1907, as they were offering £2,500 to the first man to fly round the track before the end of the year. Mr. Rodakowski was the manager of the track then, there were no microphones or loud speakers, and it was necessary that the manager should have an audible voice. One could judge the power of his voice, as he could be heard whispering across the track.

When he arrived at the track to ascertain the position for his shed, he pointed to a site by the judge's box. It was an excellent situation, but he wondered if he would be allowed to stay when the racing season started, as he did not relish the idea of moving the shed, which had an excellent wooden floor. In reply to his query on this point came the whisper, "You put it in there or nowhere at all." His engine, a 6 h.p. J.A.P., was not sufficiently powerful, so while awaiting the arrival of a 24 h.p. eight cylinder Antionette engine he persuaded motorists to give him a tow in the machine, but they generally ended in smashes. It was most difficult to get them to release the towing rope as soon as he began to swerve; if they had done so he could have glided down.

Mr. J. T. C. Moore-Brabazon, now Col.-M.P., had a shed built alongside.

Mr. Roe had notice to leave the track as Mr. Rodakowski was tired of seeing photos of him in the press. Strangely enough he had come to the same conclusion himself. However, he was allowed to stay provided he put the shed on the paddock side and painted it dark green. This was a very awkward situation, as the aeroplane had to be lifted over the spiked iron railings to get it on the track. He asked permission to make the railings detachable at his own expense. Mr. R. would not agree, so he secretly made them so, which enabled him to get the aeroplane on the track the night before a trial in order to start as soon as it was daylight. By that time he had fitted the 24 h.p. Antionette engine, and when, during the trials on the track, he heard it suddenly racing away, it was an indication that the propeller blades had gone. On one occasion when this occurred he immediately switched off the engine, casually got out and walked round to the rear of the machine to look at the propeller boss, and while examining it, a blade crashed by his side. He glanced round for the culprit, but no one was in sight; and he then realised one of the propeller blades had faithfully returned after exploring the upper regions. He was by then getting the machine into the air, but it was very difficult at first to know when it was really off the ground, as the front wheels could be clear whilst the rear ones might be touching, but when there appeared a space of quite 3 ft. between the front wheels and the ground he knew he was actually flying, as the machine was horizontal.

Just about that time he had notice to leave Brooklands, and rented a couple of arches at Lea Marshes, and took the little 9 h.p. triplane there. By June, 1909, came short flights. It was there that Mr. Howard Flanders, that earnest worker in the cause of aviation, and E. V. B. Fisher joined him. He would never forget how broken-hearted they were after the first crash at Lea Marshes, and how quickly they acclimatized themselves to those disasters. It was soon realised there was nothing else to expect, and they felt very lucky to end a day's trials without a crash.

He took his 9-h.p. triplane to the 1909 Blackpool Meeting, the first in England. The weather was very wet and boisterous, which made the cotton and paper very slack, and the engine gave a lot of trouble. Later he went to Wembley Park and fitted a 14-h.p. engine into a triplane. With this he could start off close to the foundations of the old tower on the hill and fly round the park on to the hill again close to where he had started, some trees preventing a return to the starting point. He would then reverse the machine and fly back again. That was a case of "pride comes before a fall," because, having made turns to the right and left, he thought he had all but mastered the art of flight. But to his disgust he would find the machine topple over in spite of full warp against that side, evidently through failure to use the rudder properly, as he had not up to that time realised the importance of that stern necessity. Louis Noel joined them then, and learnt to fly, becoming a great airman during the war, and spared after many exploits and receiving many decorations. F. P. Raynham was another of their pupils who gave a certain number of hours' work for an hour's flying. He was very sorry to lose one of his early faithful assistants in Howard Flanders, who left to start building on his own account in a shed near Hewlett and Blondeau. Mrs. Maurice Hewlett taught her son to fly, and he made the great raid on Cuxhaven, and was now Wing Commander Hewlett, S. V. Sippe, now Major Sippe, was another of their Brooklands pupils. He made that historic raid on Friedrichshafen, destroying a Zeppelin a month or so after war started, in conjunction with Capt. Featherstone, Briggs and Babbington.

Mr. Roe said he often used to meet at that time Sopwith, Hawker and Sigrist. He broke the British duration record with an enclosed biplane flying over seven hours, then Hawker went up with Sopwith's English Wright machine, and just beat it, with an A.B.C. engine, which, he believed, fell to bits next time the machine was taken out. There was an aeroplane exhibition at Olympia, and he used to hear about rivals spending a lot of time on his stand. Personally, he had always liked the idea of a rival picking up wrinkles from him, and hoped he would be able to do likewise from them.

When the show was over he wanted a propeller for tests the following day, but the man who granted the permits had left, and he could not get one. The gate-keeper would not allow him to pass, so he made a bolt for it, amid police whistles and cries of "Stop thief." The man who finally caught him said, "Well, it's Roe." He was someone from Hendon, and Mr. Roe explained. Then the gate-keeper subsequently allowed him to take the cherished propeller. In 1912 they built the first enclosed aeroplane to fly in the world. It was a small monoplane with an air-cooled radial engine. They then built an enclosed biplane fitted with a 60-h.p. Green engine and entered it for the 1912 military trials at Salisbury Plain. Lieut. Wilfred Parke flew it, and was about the first person to get out of a spinning nose dive. Having done a

certain trial and feeling bucked up he became rather frisky, when the machine got into a spiral nose-dive. He tried everything he could think of to bring it back, and to his joy it came out of the dive when quite close to the ground. He flew it through a heavy hail storm for about half-an-hour, and they were surprised on landing to find the leading edge of his propeller looking as if it had been eaten away by rats. During a wet day at those trials they were sitting in the shed talking of machines, when Parke said to Cody, "You can talk when you have built an aeroplane that will carry two heavy people like Pixton and Fred May with a 30-h.p. engine." Cody replied in his deep Buffalo Bill voice, "Well, well, I don't mind, I am the man who copy's nobody." Parke replied in the same tone, "Yes, yes, and you are the man nobody wants to copy." However, if anyone wanted to copy him or not, his work was of great merit, and they must all feel deeply sorry that he and many other pioneers were not with them that night, concluded Mr. A. V. Roe.

Amongst those invited to the banquet were:—Sir Samuel Hoare, Sir F. K. McClean, Sir Oliver Swann, Air Vice-Marshal Sir John Higgins, Col. The Master of Sempill, Sir G. Higgins, Sir E. Crowe, Mr. F. R. Simms, Mr. P. Foster, Lt.-Col. O'Gorman, Capt. W. Brass, Mr. H. V. Roe, Admiral Sir R. Webb, Capt. F. E. Guest, Capt. P. D. Acland, Lt.-Com. J. M. Kenworthy, Mr. G. Holt-Thomas, Maj. E. G. E. Beaumont, Lady Wakefield, Lady McClean, Mrs. A. V. Roe, Dr. Marie C. Stopes, Lady Higgins, Lady Swann, Mrs. Acland, Mr. and Mrs. C. R. Fairey, Mr. O. Short, Maj. S. V. Sippe, Mr. and Mrs. Handley Page, Mrs. and Mrs. R. Blackburn, Sir Ernest and Lady Petter, Rear-Admiral Murray F. Sueter and Mrs. Sueter, Mr. C. G. Parnall, Mr. and Mrs. H. T. Vane, Mr. and Mrs. C. C. Walker, Mr. and Mrs. E. H. Siddeley, Mr. J. D. Siddeley, Mr. R. K. Pierson, Mr. and Mrs. R. Fedden, Lt.-Col. C. L'Estrange Malone and Mrs. Malone, Mr. W. O. Manning, Maj. R. H. Mayo and Mrs. Mayo, Mr. and Mrs. R. J. Parrott, Mr. and Mrs. H. H. Morris, Mr. and Mrs. J. D. North, Lord Montagu of Beaulieu, Capt. and Mrs. A. G. Lamplugh, Mr. and Mrs. W. Lappin, Mr. and Mrs. J. Lord, Dr. Hele-Shaw, Lady Heath, Col. and Mrs. L. F. R. Fell, Mr. H. P. Folland, Mr. H. Guy-fiske, Mr. and Mrs. C. Grahame-White, and Mr. and Mrs. R. Chadwick, Air Commodore Gerrard, Major F. M. Green, Wing-Commander W. H. Anderson, Major Baden-Powell, Major T. M. Barlow, Capt. F. S. Barnwell, Lieut.-Col. J. Barrett Lennard, Mr. A. E. Berriman, Wing-Commander H. Blackburn, Major H. Hemming, Mr. J. E. Hodgson, Wing-Commander T. O'B. Hubbard, Group Capt. E. F. Briggs, Mr. R. A. Bruce, Major J. S. Buchanan, Major G. P. Bulman, Capt. L. W. Charley, Mr. A. E. L. Chorlton, Mr. H. Burroughes, Senor J. de la Cierva, Mr. E. C. Gordon-England, Mr. Fred May, Capt. F. Warren-Merriam, Lieut. de Vasseau Bos, Mr. F. P. Raynham, General R. Verdazio, Air Commodore J. G. Weir, Major M. Wright and Com. Yamasita.

Blackpool Air Pageant Entries

WE understand that while entry forms for the Blackpool Air Pageant, which takes place on July 6-7, have been sent to all aircraft firms, clubs, and private owners, there are some who wish to enter but who have not received their forms. Anyone in this position should communicate without delay to Alan Goodfellow, Clerk of the Course, 6, Brown Street, Manchester, as the closing date for entries is fixed for June 15.

The King's Cup and Siddeley Trophy Tour

INTENDING competitors for both the above events are reminded that entries close at 5 p.m. on June 29. It should be noted, also, that the Committee of the Royal Aero Club has decided that the finish of both these events shall be at Brooklands Aerodrome, and not at Hendon as previously announced.

Balloon Explodes at Pulham

AN experimental observation balloon burst into flames at Pulham aerodrome, Norfolk, on May 30. It was apparently being drawn to earth but when still at 600 feet there was an explosion and fire broke out. It became detached from the cable and drifted to the ground about half-a-mile away where it was totally destroyed. Fortunately there was no one on board at the time.

American Balloon Race Fatalities

IN spite of warnings that thunderstorms might be expected the national elimination balloon race started at Pittsburgh on May 30 and thirteen of the fourteen balloons were quickly forced down. Lieut. P. Everet, the pilot of the Army balloon No. 3 was killed when his balloon was

struck by lightning and caught fire. His companion, Lieut. Ugent, managed to bring it down without injury to himself. Another balloon, the Goodyear, No. 5, caught fire also, and its pilot, Mr. Ward T. van Orman, broke his leg, after leaping with a parachute, and his companion, Mr. Walter Morton, was found dead after he had jumped out. The airship, Los Angeles, was abroad during the storm but returned safely to Lakehurst, New Jersey.

Gordon Bennett Race

GREAT BRITAIN has notified the National Aeronautical Association of the withdrawal of its entry for the International Gordon Bennett Balloon Race which starts from Detroit on June 30.

Sir C. Wakefield's Gift

MR. COATES, the New Zealand Prime Minister, has accepted the offer of Sir Charles Wakefield to provide the Government with a light aeroplane.

Ceylon

LIEUT. CARNDUFF crashed in a Fairey seaplane 100 miles from Colombo, Ceylon, on June 8 in the heart of the hilly country. He was slightly injured. He had been flying extensively over the district for some days and the hilly jungle offered no landing places for a seaplane.

Inland Air Lines

IMPERIAL AIRWAYS are contemplating an air service to Scotland and a trial flight is expected to take place on June 15 next by an Armstrong-Siddeley machine which will leave at the same time as the L.N.E.R. non-stop train from King's Cross. It will travel along the East Coast resorts and communicate throughout by wireless.

AIRSHIPS FROM THE FOUR WINDS

The Missing Airship

AFTER a silence lasting more than a fortnight definite wireless communication has at last been established between the missing airship, the "Italia," and its supply ship, "Citta di Milano." The crew are separated and drifting in groups on the ice off North East Land. General Nobile and eight of his crew who were in one gondola became detached from the airship which drifted away with the remaining seven on board and landed about 20 miles away. General Nobile started to walk towards the steamer, *Braganza*, 125 miles away, but abandoned it, although three of his companions continue to fight through. Many of the provisions carried in the airship have been lost and there is now no means of warming food. Wireless messages continue to be received from the General appealing for firearms, stoves and medical supplies. He has been able to make a small tent with fabric which was in the gondola. Many of the party are suffering from frozen hands and feet. Maj. Maddalena, the Italian pilot, reached Amsterdam in a large machine on his way to King's Bay and left for Copenhagen on June 11. Lieut. Luetzow Holm made a forced landing in Mossel Bay, Spitzbergen, whilst searching and was rescued by a dog-sled team. Another machine was leaving Pisa on June 14 for the north, and Sweden has ordered a large hydroplane with three engines to start from Stockholm. A Russian ice-breaker, *Krassin*, is expected at Spitzbergen shortly with a three-engined machine on board.

Flight to India

THE Duchess of Bedford, Capt. C. D. Barnard, and Mr. E. H. Alliot left Lympne on June 10 in a Fokker monoplane (Bristol "Jupiter" engine) in an attempt to fly to India and back in eight days. It was necessary to take off towards telegraph wires owing to the prevailing wind, and the wires were touched and dragged down, but fortunately without mishap to the machine. After a flight of 14 hours they reached Sofia, a distance of 1,260 miles, in accordance with their anticipations. The following morning they left for Aleppo.

Atlantic Aspirants

IN the single-engined monoplane, "Miss Columbia," belonging to Mr. Levine, the American millionaire who flew the Atlantic with Mr. Chamberlin, Miss Mabel Boll, Capt. Leboutillier and Mr. A. Argles left New York on June 12, and reached Grace Harbour, Newfoundland, from where they intend hopping off for Europe. Miss Boll's competitor, Miss Amelia Earhart, who is at Trepassey, Newfoundland, with a three-engined Fokker seaplane, named "Friendship," has made many attempts to take-off for the Atlantic flight with her pilot Mr. Wilmer Stulz, but failed, apparently due to overloading.

East to West Atlantic Flight

THE Atlantic flight from east to west is to be essayed again. Two American airmen, Lieuts. Kangan and Johnson, hope to start from London on July 1 in a three-engined Fokker monoplane and fly via the Azores, with Philadelphia as their objective. Should success prevail, a prize of £5,000 will be awarded them. The former officer's wife will be a passenger.

Atlantic Airmen Returning

MAJOR FITZMAURICE, Baron von Hueneveld and Capt. H. Kohl, the three airmen who flew from Ireland to Greenly Island, Canada, recently, in the Junkers monoplane, the "Bremen," are returning to Europe by boat.

Mexican Pilot's Fine Flight

CAPT. EMILIO CARRANZA, the Mexican pilot, left Mexico City on June 11, to attempt a non-stop flight of 2,000 miles to Washington, but he was forced to land at Mooresville, North Carolina, owing to very thick fog after flying 1,700 miles. The fog had even stopped air mail pilots. Later, when it cleared, Capt. Carranza reached Washington.

Another Antarctic Expedition

A THIRD expedition to the Antarctic is preparing under the command of Commander D. G. Jeffery, R.N. (retired). A large aeroplane, having a petrol capacity of 1,500 gallons and a cruising radius of 3,000 miles, will be taken as well as a smaller machine, possibly a Lockheed "Vega," like that used by Capt. Sir G. Wilkins on his recent Arctic flight.

Greek Air Tour

A GREEK Breguet XIX flown by two Greek military pilots, MM. Papadakos and Adamides, left Tatoi on June 8 for a tour of the Mediterranean.

Lady Bailey

THE request of Lady Bailey to fly to Katanga, Belgian Congo, has been acceded to by the Belgian authorities at Elizabethville.

Orly Aviation Display Accident

AN unfortunate accident marred the aviation display, organised by the Union of Civil Pilots (France), at Orly on May 27. One of the competing pilots, during a practice flight, over-ran when landing and crashed into the enclosure, killing two of the spectators and injuring seven others.

Round-the-World

MR. JOHN MEARS and Mr. Charles Collyer are attempting to encircle the globe in 23 days with the help of a monoplane.

Paris-Teheran Air Service

IT may be of interest to note that last week there arrived in Teheran—via the Junkers air service in Persia—the first passenger with a through ticket by air from Paris to Teheran; the journey from Paris was undertaken via Berlin, Moscow and Baku by air the whole way to Teheran. The total flying time of the journey was 52½ hours.

Italian Air Visit

GENERAL BALBO, the Under-Secretary for Air in Italy, will lead twelve Italian machines on a flight to England shortly, and the airmen will stay for the Hendon Pageant on June 30, but not take part.

Junkers Machines for Afghanistan

A THREE-ENGINED Junkers G.24 monoplane, which was presented to the Afghan King when he visited Berlin during his European tour a few months ago, will be flown to Afghanistan soon, together with two single-engined Junker F.13 machines, which have been bought by the Afghan authorities.

Western Canada Airways Extend into British Columbia

THE entry of Western Canada Airways, Ltd., of Winnipeg, one of the largest commercial aviation firms in the Dominion, into the British Columbia field is forecast in the purchase of Pacific Airways, Ltd., of Vancouver, B.C. Completion of the deal is announced by Mr. John Hunter, secretary of Western Canada Airways, Ltd., and Maj. D. R. MacLaren, D.S.O., M.C., managing director of the British Columbia firm. Plans for a triangle passenger and express service between Vancouver, Victoria and Seattle, with one round trip daily, have been made by the firm, which will also conduct the fisheries patrol for the Dominion Government in British Columbia and do commercial flying of all kinds. A number of new aeroplanes will be used by the firm in British Columbia, including two of the nine super-Fokkers at present on order for the company for works in Manitoba.

Flying Pupils "Show Off" at St. Louis

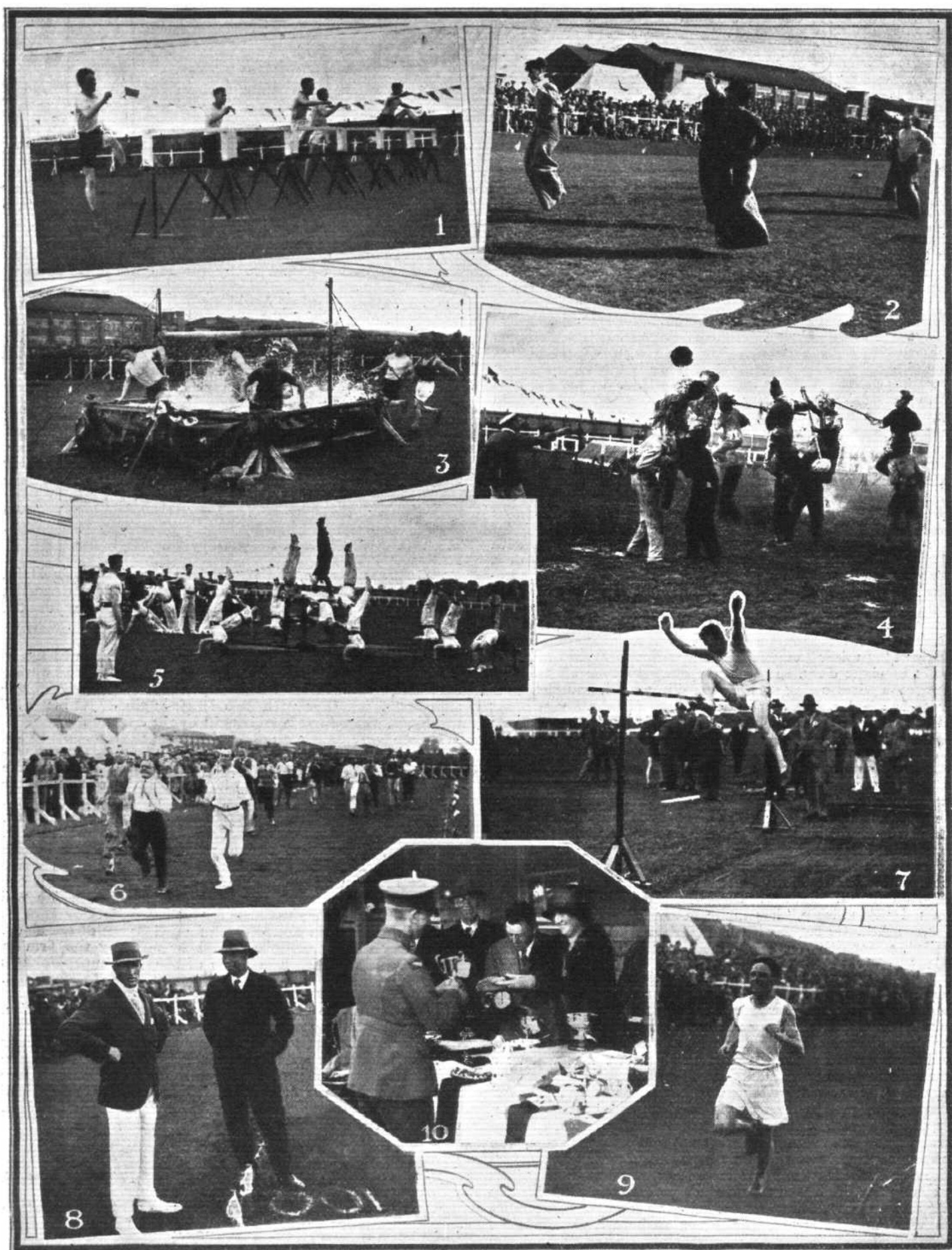
ACCORDING to our American contemporary, *Aviation*, the Von Hoffmann Aircraft School of St. Louis has introduced a novel feature in its training course. During their last few hours of cross-country flying instruction, those pupils who live near St. Louis are allowed to make a trip to their home town. Here they can give their folks a thrill by circling over the "old home," after which they land and hand the machine over to the instructor.

Twenty Years Ago!

Extract from "The Auto." (Precursor of "Flight"), June 13, 1908.

"The Peltrie Aeroplane.—On Whit Monday M. Peltrie . . . achieved a flight of some 1,300 yards on his aeroplane. A feature of the machine is that it is of the monoplane type, having only one surface, and a peculiarity of the flight performed with it on Monday was that it took place at an altitude of about 120 ft. from the ground. . . . In making the descent the aeroplane was somewhat damaged, and M. Peltrie himself sustained slight injuries to his arm."

"A Delagrangé 'Three-Decker.'—It is reported from Rome that M. Delagrangé, as the outcome of his recent experiments, contemplates constructing a three-decker aeroplane, which he believes will be stable in any wind."



["FLIGHT" Photographs]

AT HENLOW STATION SPORTS : This set of snaps mostly speak for themselves, but it may be pointed out that 1 shows the Hurdle Race ; 2, the Sack Race ; 3, negotiating the " pond " in the Obstacle Race ; 4, a lively moment in the Sweep and Miller contest ; 5, a very effective Gym. Display ; 6, the Officers' Race ; 7, Cpl. Allen winning the High Jump ; 8, Wing Commander Fowler and Group Captain A. Vere Bettington ; 9, Finish of 3 miles' Race. ; 10, Mrs. Bettington presenting the prizes.

HENLOW STATION SPORTS

THE Royal Air Force station of Henlow, which houses the great aircraft and engine repair depôt of the force in Great Britain, and which numerous general duty officers attend to take a special course in engines, made elaborate preparations for its station sports on Thursday, June 7. Athletics are a very serious matter at Henlow, and the level of talent there is high. The station's tug-of-war team has beaten Uxbridge in the final of the R.A.F. championship at the Royal Tournament at Olympia, and will accordingly be entered for the Inter-services Championship. For the past two years in succession the station's relay team has put up record times for the county of Bedford, and A./C.1 Thomas has also established a Bedford county record for the mile. So the dismay of Group-Capt. A. Vere Bettington, C.M.G., and his committee may be imagined when torrents of rain fell unceasingly all the morning. The prospect seemed so hopeless that the office of *FLIGHT* rang up Henlow and inquired if the sports were "off" for the day. Henlow, fired with the true R.A.F. spirit, stoutly replied, "No; they are on." And fortune favoured the brave. After midday the sun broke through the clouds and shone merrily. A fresh breeze dried the turf and got it and the cinder track into excellent condition, and consequently everyone enjoyed a delightful summer afternoon. Once, it is true, a sharp squall blew up and sent everyone, except certain antediluvian monsters, scurrying to the shelter of the tents, but it barely lasted five minutes. Other masses of dark cloud which appeared on the horizon sportingly decided to give Henlow a miss, and passed by on the other side.

Everything, in fact, went very well indeed. The smart team work of all the officers and other ranks who acted as officials was particularly noticeable. All the staff work was done keenly and efficiently, and no hitch of any sort occurred. In addition, the officers and other ranks were most hospitable and indefatigable hosts, from the Group Captain down to—shall we say?—the chaplain; and guests were given a very good time indeed. There was a large crowd present, considering the geographical position of Henlow. The station band played extremely well, and the selection of pieces was of the brightest. Speaking of the band, all its members made good sleuths, and not even the sole of a Scotsman's boot could prevent one bandsman (I think he was playing an oboe) from nosing out a particularly valuable penny.

There were clowns, of course, who were indefatigable in keeping things merry, while unstinted delight was caused to old as well as young by the antics of the silver-doped monsters. One was certainly a giraffe, another appeared to be a horse, and a third was stated to be a chicken—but that took some believing. Plesiosaurus would probably be a more correct zoological description. Anyway, the children's shrieks of delight when it chased them were good to hear.

The gymnastic display showed a very high standard of excellence. The physical standard of the men, and the smooth finish of all that they did, were alike admirable. With the station tug-of-war team absent at Olympia, it was surprising to find such hefty work on the rope by four section teams. The tie for the high jump between Corporal Allen and A./C. Norcott, at 5 ft. 6 in., was a most creditable performance.

Among other events, the excellent judgment with which A./C. Landells won the three miles deserves mention; and the result of the officers' handicap (one yard being allowed for each year of age) showed that at Henlow the senior officers can hold their own in wind and limb against the youngsters. Altogether it was a very successful and enjoyable afternoon.

Results

100 Yards.—1. A./C. Tillman; 2. L.A/C. Halls; 3. A./C. Hammond.

Putting the Shot.—1. Corporal Eyles, 32.11 ft.; 2. A./C. Wray, 32.6 ft.; 3. A./C. Endean, 32.3 ft.

Half-Mile.—1. A./C. Thomas; 2. Sergt. Sindall; 3. A./C. Landells.

Pillow Fighting (on bar over water tank).—A/C. Jackson and L.A.C. Guinen.

220 Yards.—1. L.A/C. Halls; 2. A./C. Tillman; 3. L.A/C. Craven-Griffiths.

High Jump.—1. Corporal Allen and A/C. Norcott (tie), 5 ft. 6 in.; 2. L.A/C. Reid, 5 ft. 1 in.

One Mile.—1. A./C.1 Thomas; 2. Sergt. Simball; 3. A./C. Landells.

Tug of War (final).—Engine Repair Section beat Aeroplane Repair Section.

Inter-Section Relay (teams of 4).—1. E.R.S. (A); 2. M.T.S. & A.; 3. E.R.S. (B).

Egg and Spoon Race (N.C.Os' and Airmen's wives).—1. Mrs. Mansfield; 2. Mrs. Newing; 3. Mrs. Guthrie.

Officers' 100 Yards Handicap.—1. Wing Commander Fowler; 2. Flight-Lieut. Stafford; 3. Sqdn.-Ldr. Stone.

Boys' Race (60 Yards).—1. M. Carroll; 2. F. Dolan; 3. R. Guthrie.

Long Jump.—1. L.A/C. Tillman, 19 ft. 10½ in.; 2. Corpl. Allen, 19 ft. 9 in.; 3. A/C. Norcott, 18 ft. 11 in.

Obstacle Race.—1. A/C. Drew; 2. A/C. Bird; 3. A/C. Butcher.

W.Os' and Sergts' 100 Yards' Handicap.—1. F./Sergt. Dolan; 2. S.M.1 Goddard; 3. Sergt. Wolfenden.

440 Yards.—1. Sergt. Sindall; 2. L.A/C. Craven-Griffiths; 3. A/C. Salmon.

Three Miles.—1. A/C. Landells; 2. A/C. Lilley; 3. A/C. Bolt.

Sweep and Miller.—1. H.Q. Section.

Girls' Race.—1. Betty Hill; 2. Marjory Wolfenden; 3. Audrey Wolfenden.

120 Yards' Hurdles.—1. L.A.C. Halls; 2. A/C. Norcott; 3. A/C. Tillman.

Officers' Wives Race.—1. Mrs. St. Ledger; 2. Mrs. Brown; 3. Mrs. Lavender.

One Mile Relay (Invitation).—1. Bedfordshire and Hertfordshire Regiment.

Sack Race.—1. Corporal Eyles; 2. L.A/C. Blackmore; 3. L.A/C. Yule.

Band Race.—1. A/C. Winter; 2. A/C. Harrison; 3. A/C. Rusbridge.

Consolation Race (440 Yards).—1. A/C. Softley; 2. A/C. Craig; 3. A/C. Cooper.

F. A. DE V. R.

Faireys for the Argentine

WE understand that the Fairey Aviation Co., Ltd., of Hayes, have received from the Argentine Navy a contract for Fairey IIIF machines convertible to land and sea work.

A.T.T. Winner

MR. K. TWEMLOW, a member of the Lancashire Aero Club, gained third place in the Junior T.T. race this year on a Dot machine (J.A.P. engine). His speed was 63.67 m.p.h.

Wright Aeronautical Corporation

THE directors of the Wright Aeronautical Corporation have recommended the doubling of the company's capital, which at present stands at 250,000 shares.

I.L.A. Gold and Bronze Medals Awards

WE understand that in addition to the gold medal of the King of the Belgians, the High Patron of the International League of Aviators, which has been presented to Ambassador Myron T. Herrick, in recognition of his services to the cause of aviation and his constant interest in the League, it has been decided to award to Master Lawrence B. Sperry, the eight-year-old son of the late Lawrence Sperry, the Bronze Medal of the King of the Belgians, as a token of the admira-

tion of aviators in all parts of the world of his father's contribution to the progress of aviation.

New Appointment, R.A.F. Chaplains Branch

THE Air Ministry announces:—His Majesty the King has been graciously pleased to approve of the following appointment:—The Reverend Robert Edward Vernon Hanson, O.B.E., M.A., Chaplain-in-Chief, Royal Air Force, to be an Honorary Chaplain to His Majesty.

The Royal Air Force Memorial Fund

THE usual meeting of the grants sub-committee of the fund was held at Iddesleigh House, on May 17. Mr. W. S. Field was in the chair, and the other members of the committee present were: Mrs. L. M. K. Pratt-Barlow, O.B.E., Squadron-Leader Douglas Iron, O.B.E. The committee considered in all 15 cases, and made grants to the amount of £174 5s. 6d.

The usual meeting of the Grants sub-committee of the fund was held at Iddesleigh House, on May 31. Lieut.-Comdr. H. E. Perrin was in the chair, and the other members of the Committee present were:—Mrs. L. M. K. Pratt-Barlow, O.B.E., Squadron-Leader Douglas Iron, O.B.E. The Committee considered in all 12 cases, and made grants to the amount of £132 19s.

THE ROYAL AIR FORCE

London Gazette, June 5, 1928.

General Duties Branch

Pilot Officer R. F. Part is promoted to rank of Flying Officer (Jan. 30); Flight-Lieut. A. P. Davidson is restored to full pay from half-pay (May 21); Flying Officer T. Sullivan is placed on retired list on account of ill-health (June 6). The follg. Officers resign their short-service comms.:—Flying Officer L. H. Weedon (May 18); Pilot Officer E. F. Shine (May 23).

Medical Branch

Flight-Lieut. H. B. Troup is promoted to rank of Squadron Leader (June 6); Flying Officer F. F. Anslow is promoted to rank of Flight-Lieut. (Dental) on promotion to the rank of Captain in Army Dental Corps, with effect from

March 26, and with seniority of Oct. 1, 1927; Flight-Lieut. (Hon. Squadron Leader) H. C. Perkins relinquishes his temp. commn. on completion of service, and is permitted to retain the honorary rank of Squadron Leader (June 6). The follg. Flight-Lieuts. (Captains Army Dental Corps) relinquish their temp. comms. on return to Army duty (June 1):—F. S. S. Whiter, F. F. Anslow.

RESERVE OF AIR FORCE OFFICERS

General Duties Branch

F. A. Wardell is granted a commn. in Special Reserve as Pilot Officer on probation (June 1); Pilot Officer on probation H. Buckingham is confirmed, in rank (May 23).

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the R.A.F. are notified:—

General Duties Branch

Air Vice-Marshals: F. R. Scarlett, C.B., D.S.O., to H.Q., Air Defence of Great Britain, Uxbridge, on appointment as Air Officer Commanding-in-Chief, 26.5.28. C. L. Lambe, C.B., C.M.G., D.S.O., to H.Q., Coastal Area, on appointment as Air Officer Commanding, 15.5.28.

Group Captain E. D. M. Robertson, D.F.C., to R.A.F. Depot, Uxbridge 4.5.28.

Squadron Leaders: E. R. Vaisey, to R.A.F. Depot, Uxbridge, 31.3.28; H. A. Whistler, D.S.O., D.F.C., to R.A.F. Depot, Uxbridge, 4.5.28.

Squadron Leader D. E. Stodart, D.S.O., D.F.C., to R.A.F. Depot, Uxbridge, 4.6.28.

Flight Lieutenants: H. Hackney, to No. 58 Sqdn., Worthy Down, 8.5.28. G. R. Ashton, to No. 1 Sch. of Tech. Training (Apprentices), Halton, 20.5.28. K. L. Boswell, to R.A.F. Depot, Uxbridge, 22.3.28. T. C. Traill, D.F.C., to Cambridge University Air Sqdn., 31.3.28. E. J. D. Routh, to No. 16 Sqdn., Old Sarum, 30.5.28. O. G. Gregson, to R.A.F. Depot, Uxbridge, 23.5.28. E. H. D. Spence, to R.A.F. Training Base, Leuchars, 30.5.28.

Flight-Lieutenants: G. R. O'Sullivan, to No. 444 Flight, 2.5.28. F. W. Smolgar, D.F.C., to No. 1 School of Technical Training (Apprentices), Halton, 4.6.28. A. J. E. Broomfield, D.F.C., to R.A.F. Station, Hornchurch, 1.4.28.

Flying Officers: B. S. Brice, A.F.C., to R.A.F. Depot, Uxbridge, 1.5.28. F. G. S. Wilson, to R.A.F.M.T. Depot, Shrewsbury, 31.5.28. A. H. Montgomery, to H.Q., Air Defence of Great Britain, Uxbridge, 21.5.28. A. I. Riley, A.F.C., to R.A.F. Depot, Uxbridge, 5.5.28. E. A. Healy, to Central Flying Sch., Wittering, 22.5.28. A. R. Hamilton, to No. 13 Sqdn., Andover, 4.5.28. R. Scott-Taylor, to Central Flying Sch., Wittering, 20.4.28.

CORRESPONDENCE

AIR SIGNS

[2172] Will you kindly tell me what is the use of an air sign? I take it that an air sign is designed for the purpose of telling a pilot where he is. We have, presumably, for this purpose, such names as Ashford on the railway station and Slough on the railway embankment, and Tunbridge, also near a railway line. But it can also be presumed that a pilot flies with a map by means of which he can identify towns. If a pilot is lost, it is because he can find on the ground no recognisable landmarks. An air sign, therefore, to be of use must be situated away from all distinctive landmarks such as towns. But an air sign in open country, unless of colossal proportions, is not visible from the air unless the pilot is almost over it. On what scale and in what numbers would air signs have to be made to be of real service? Would any body bear the cost? In fact, are air signs of any use?

London, June 1, 1928

G-EB??

AIR MINISTRY NOTICES TO AIRMEN

Examination for Air Navigators

An examination for 1st and 2nd Class Air Navigators' licences will be held at the Air Ministry, Gwydyr House, Whitehall, on Monday, Tuesday, and Wednesday, July 9, 10 and 11, 1928.

Application forms, the syllabi and conditions of examination, may be obtained on application to the Secretary, Air Ministry (C.A.2), Gwydyr House, Whitehall, London, S.W.1.

Formal applications (on form C.A.2c) to sit at this examination, together with the prescribed fees, should be received at the above address not later than June 25, 1928. Candidates should give with their applications full details of any qualifications and experience they already possess.

Before a licence can be issued, candidates will have to pass a medical examination at the Central Medical Board, 5/6, Clements Inn, London, W.C.2. Arrangements can be made for this examination to take place on July 11, 1928, if candidates make early application to be examined on that day.

(No. 43 of 1928.)

Meteorological Office Forecasts

THE Air Ministry announces:—From June 1, the periods of time covered by the forecasts issued by the Meteorological Office to the press will be changed so as to make them more useful to the general public. In the past the forecasts published in the morning newspapers have been prepared for a period of 24 hours commencing at midnight so that, in fact, a substantial part of the "forecast period" had already elapsed before it was seen by those for whom it was intended. In future these forecasts will refer to the period from 6 a.m. to midnight. Similarly the forecasts appearing in the evening newspapers, which have hitherto covered the 24 hours' from 3 p.m. will refer to the period from noon to noon. Thus in all cases readers of newspapers will know that the forecast refers to a period of some 15 to 20 hours from the time at which the paper is normally available, and so be in the same position as listeners to the forecasts issued by the B.B.C. which have always referred to the period commencing at the time of issue.

PUBLICATION RECEIVED

Departing Wings. By Faith Baldwin. Sampson Low, Marston and Co., Ltd., 100, Southwark Street, London, S.E. Price 7s. 6d. net.

NEW COMPANIES REGISTERED

A. J. HOMER AND SONS, LTD., Reliance Works, 116, Hope Street, Balsall Heath, Birmingham. Capital £15,000, in £1 shares. Under agreement with A. J. Homer and A. Homer, general sheet metal workers to the motor, aircraft, engineering and general trades, formerly carried on by them as "A. J. Homer and Son" at Reliance Works, Hope Street, at 250-260, Gooch Street, and at 84, Benacre Street, all in Birmingham. Life directors: A. J. Homer, A. Homer.

MERSEYSIDE AERO AND SPORTS CO., LTD., 320, India Buildings, Water St., Liverpool.—Capital, £500 in 1s. shares. Acquiring the assets and liabilities of the unincorporated association known as the Liverpool and District Aero Club; R. H. Thornton, M.A., 35, Croxteth Road, Liverpool, assistant manager. J. B. McKay, 320, India Buildings, Water Street, Liverpool. First directors to be the members of the Committee of the above Club.

AERONAUTICAL PATENT SPECIFICATIONS

(Abbreviations: Cyl. = cylinder; i.c. = internal combustion; m. = motor. The numbers in brackets are those under which the Specifications will be printed and abridged, etc.)

APPLIED FOR IN 1927

Published June 7, 1928

20,881. AEROFOTO AKT.-GES. Cameras. (275,661.)
27,919. H. JUNKERS. Apparatus for landing or raising and launching seaplanes, etc. (290,505.)

Published June 14, 1928

4,359. G. H. SCOTT and F. M. ROPE. Aerostats. (290,716.)
7,641. T. R. CAVE-BROWNE-CAVE. Steam-condensing radiators for engines of aircraft. (290,782.)
11,222. C. B. WALKER and R. J. MITCHELL. Electric starting-apparatus for i.c. engines. (290,808.)
23,809. A. N. ANDERSEN. Aeroplane bodies, boats, etc. (277,365.)

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